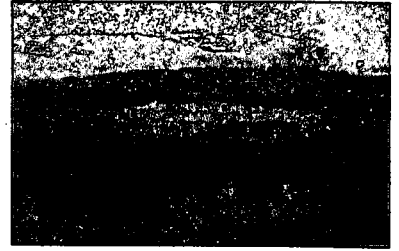


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Quarterly Monitoring Report 1st Quarter 2003

L.E. Carpenter & Company
Wharton, New Jersey

USEPA ID No. NJD002168748

April 2003

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Appendix B	Apparent Free Product Volume Trend Charts
Appendix C	1 st Quarter 2003 Monitoring Well Sampling Data
Appendix D	Groundwater Concentration Trend Analysis
Appendix E	1 st Quarter 2003 Laboratory Analytical Report

Section 1

Introduction

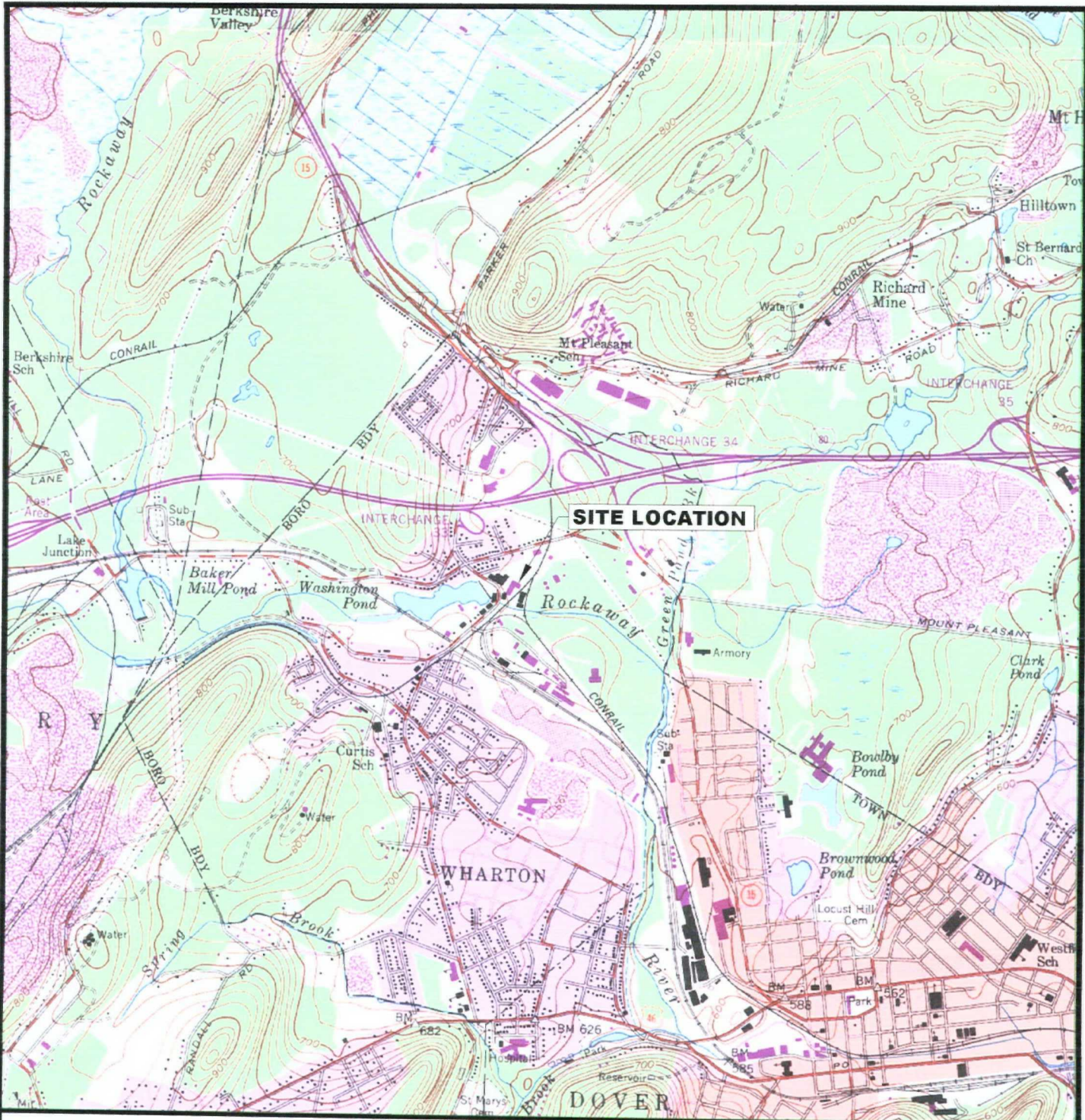
RMT, Inc. (RMT), on behalf of our client, has prepared this Quarterly Monitoring Report for the L.E. Carpenter and Company (LEC) ("site") located at 170 North Main Street, Wharton, New Jersey (Figure 1). Quarterly monitoring events are performed at the site to comply with paragraph 35 of the 1986 Administrative Consent Order (ACO) issued to LEC by the New Jersey Department of Environmental Protection (NJDEP). We provide a summary of activities completed during the first quarter of 2003, including routine quarterly groundwater monitoring, surface water monitoring, and monthly free product recovery activities. In addition, this report includes summaries of additional site activities performed during the first quarter of 2003, and activities scheduled for commencement during second quarter of 2003. We have certified this report in accordance with requirements outlined in N.J.A.C 7:26E-1.5 (Appendix A).

RMT conducted the following tasks during the first quarter of 2003:

- Monthly mobile free product recovery using enhanced fluid recovery (EFR) techniques in accordance with the NJDEP approval letter dated August 20, 1997 (Ref. Section 2).
- Quarterly groundwater monitoring as required under the ACO (Ref. Sections 3 and 4).
- Surface water sampling at the drainage ditch feature that separates the LEC site from the Air Products property as requested in the NJDEP letter dated May 31, 2002 (Ref. Section 5).
- Various follow-up activities associated with both the lead and free product investigations and proposed conceptual remediation plan. (Ref. Section 6).

We provide a discussion of these activities in the referenced sections. In addition, in Section 3.1 of this report we have provided responses to the NJDEP March 26, 2003 letter regarding their review of the January 28, 2003 4th quarter 2002 report.

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NEW JERSEY



QUADRANGLE LOCATION



APPROXIMATE SCALE IN FEET

SOURCE

1. BASE MAP DEVELOPED FROM THE DOVER, NEW JERSEY 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP, DATED 1954, PHOTOREVISED 1981.



**LE CARPENTER
 WHARTON, NEW JERSEY**

**SITE LOCATION MAP
 FOR 1st QUARTER 2003**

DRAWN BY:	SJL
APPROVED BY:	NC
PROJECT NUMBER:	3868.35
FILE NUMBER:	38683561.DWG
DATE:	APRIL 2003

FIGURE 1

Section 2

Monthly EFR Activities

2.1 Introduction

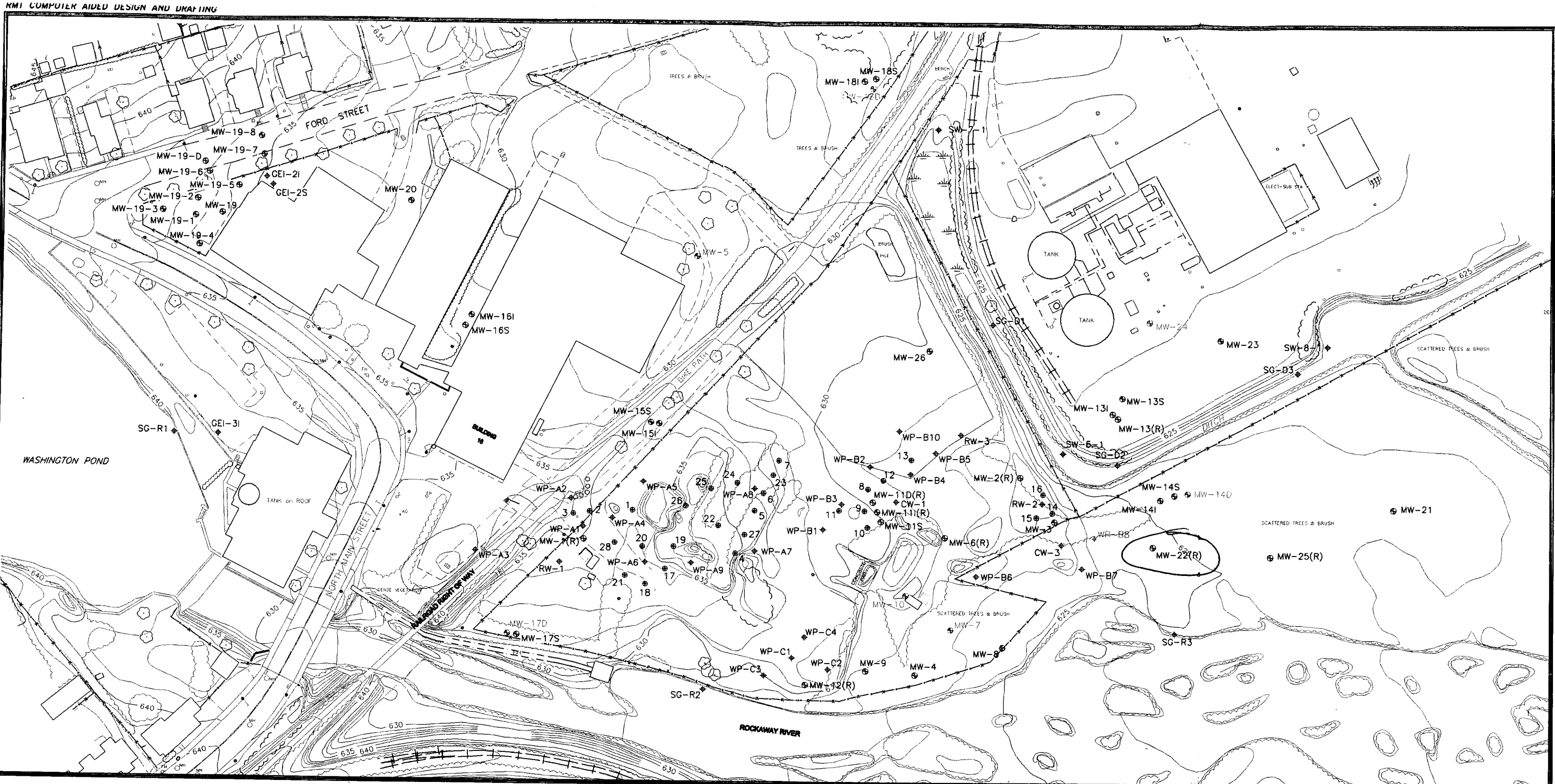
In August 1997, the NJDEP approved the Remedial Action Plan (RAP), which described free product removal using enhanced fluid recovery (EFR) for the eastern portion of the subject site (east of the railroad right-of-way). EFR is conducted by applying a vacuum to product recovery wells to primarily remove free-phase product in addition to limited volumes of contaminated groundwater and contaminant vapors within vadose zone and capillary fringe soils. As the result of increased aeration, this procedure enhances any natural biodegradation that may be occurring in the soil and groundwater. The locations of the 28 EFR wells purged during each monthly EFR event and all groundwater monitoring wells are shown in Figure 2.

RMT arranged performance of three EFR events during the first quarter of 2003 on March 11th, 17th, and 21st. As outlined in the RMT letter to NJDEP dated March 6, 2003, all three EFR events were conducted in March as snow and ice cover prevented site access to the eastern portion of the property throughout January and February. RMT coordinated measurement of the free product thickness in each recovery well (where applicable), followed by EFR. RMT's subcontractor, CEMCO, used the recorded free product measurements to determine the placement of the drop pipe that maximized free product recovery volumes. Table 1 lists apparent free product thickness measurements recorded during first quarter 2003. RMT observed measurable free product within 11 of the 69 wells monitored on March 18, 2003 (Table 6). Table 1 also provides a cumulative breakdown of EFR specific information such as minimum and maximum free product thickness levels (in feet), associated waste management costs, and extracted product (liquid and vapor phase) and groundwater volumes (in gallons) to date.

During first quarter 2003, EFR activities were conducted utilizing a Nortech, Inc. 55B vacuum head apparatus capable of producing a vacuum of 17-inches of mercury (in Hg) at 100 cubic feet per minute (cfm). This unit is connected to a fitted 55-gallon drum, and braced to a mobile 4-wheel drive vehicle. When compared to the previously utilized vacuum trucks, use of this system has enabled CEMCO to get closer to each individual EFR well head, minimizing potential losses in the system previously experienced due to the use of greater lengths of extraction hose, while maximizing the maneuverability of the drop pipe. Use of this system has also resulted in a more efficient EFR event, minimizing the volume of groundwater extracted. The average ratio of extracted groundwater to free product during the first quarter of 2003 was

approximately 0.06 gallons/gallon. Before use of this method (November 1997 to December 1999), the ratio of extracted groundwater to free product was 4.7 gallons/gallon.

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Operator Name: lucidos
Scale: 1"=50'



LEGEND		
---	PROPERTY LINE	◆ WP-B7 WELL POINTS
---	FENCE	◆ SG-R1 RIVER POINT
⊕ MW-21	MONITORING WELL	◆ SG-D1 DRAINAGE CHANNEL POINT
⊕ MW-24	ABANDONED WELL	◆ GEI-21 PIEZOMETERS
⊕ 13	ENHANCED FLUID RECOVERY WELL	⊕ SW-7-1 SURFACE WATER SAMPLE
◆ RW-2	RECOVERY WELL	◆ TREATMENT BUILDING
◆ CW-3	CAISSON WELLS	

L.E. CARPENTER
WHARTON, NEW JERSEY

SITE PLAN WITH WELL LOCATIONS
FOR 1st QUARTER 2003

DRAWN BY:	SJL	PROJECT NUMBER:	3868.35
CHECKED BY:	ES	FILE NUMBER:	38683562.DWG
APPROVED BY:	NC	DATE:	APRIL 2003



1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
PHONE: 734-971-7080
FAX: 734-971-9022

Table 1
L.E. CARPENTER - Wharton, New Jersey
Free Product Recovery - EFR Well # 1 - 28

THROUGH 1ST QUARTER 2003

EFR Event Date	Development November 21, 1997 Feet of Product	EFR #1 December 9, 1997 Feet of Product	EFR #2 January 7, 1998 Feet of Product	EFR #3 January 22, 1998 Feet of Product	EFR #4 February 17, 1998 Feet of Product	EFR #5 March 13, 1998 Feet of Product	EFR #6 March 27, 1998 Feet of Product	EFR #7 April 24, 1998 Feet of Product	EFR #8 May 20, 1998 Feet of Product	EFR #9 June 30, 1998 Feet of Product	EFR #10 July 31, 1998 Feet of Product	EFR #11 ⁽¹⁾ August 24, 1998 Feet of Product	EFR #12 September 17, 1998 Feet of Product	EFR #13 October 22, 1998 Feet of Product	EFR #14 November 20, 1998 Feet of Product	EFR #15 December 18, 1998 Feet of Product	EFR #16 January 13, 1999 Feet of Product	EFR #17 February 18, 1999 Feet of Product	EFR #18 March 24, 1999 Feet of Product
EFR-1	1.04	1.53	1.94	0.36	2.48	0.93	0.94	1.42	1.65	2.11	1.28	1.22	1.71	1.59	1.71	1.67	0.53	1.79	3.68
EFR-2	1.55	1.50	1.88	0.08	2.20	2.98	2.92	2.65	2.44	1.78	1.12	1.09	1.21	1.29	1.51	1.41	0.95	1.40	2.42
EFR-3	0.85	1.02	1.27	-	1.58	1.19	0.03	0.24	0.19	0.77	0.72	0.83	1.03	1.01	1.19	1.18	1.14	1.01	1.63
EFR-4	1.03	2.27	0.54	0.07	0.30	-	-	-	-	-	0.38	1.23	2.40	2.17	1.75	1.79	0.73	0.10	0.14
EFR-5	4.03	3.74	4.25	0.32	3.29	3.39	1.71	2.71	2.02	1.88	2.38	2.62	2.33	2.52	2.19	2.28	2.88	3.47	8.15
EFR-6	0.72	1.00	1.24	-	2.27	1.71	1.17	2.23	1.55	1.58	1.98	1.56	1.42	1.25	1.29	1.38	0.48	0.84	0.88
EFR-7	0.17	0.08	0.16	-	-	-	-	-	-	0.02	0.02	0.03	0.07	0.05	0.20	0.18	0.02	0.04	0.04
EFR-8	0.05	0.00	0.00	-	0.08	-	-	-	-	0.03	0.04	0.08	0.13	0.09	0.07	0.03	0.12	0.00	0.03
EFR-9	0.00	1.10	1.79	1.15	0.16	3.08	0.08	0.07	0.11	0.29	0.61	0.88	1.23	1.31	1.28	1.88	0.74	0.49	0.08
EFR-10	5.20	5.80	8.42	2.34	7.47	7.08	6.05	6.71	5.47	5.68	4.94	4.52	4.34	4.38	3.88	3.89	3.88	5.79	5.52
EFR-11	3.07	4.04	4.28	5.64	4.47	4.82	4.87	5.91	5.73	8.08	4.73	4.47	3.95	4.06	3.65	3.52	2.42	4.89	2.84
EFR-12	0.04	0.03	0.00	-	0.07	-	-	-	0.02	0.28	0.22	0.28	0.24	0.15	0.29	0.17	0.04	0.11	0.05
EFR-13	0.48	0.58	1.33	0.05	1.28	1.07	1.07	0.87	-	0.80	0.58	0.48	0.68	0.82	1.13	1.30	0.22	1.19	0.15
EFR-14	0.10	0.18	0.00	-	-	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	-
EFR-15	0.09	0.12	0.27	-	0.08	-	-	-	-	-	-	-	0.00	0.00	0.12	0.12	0.11	0.07	0.01
EFR-16	0.00	0.00	0.00	-	-	-	-	-	-	0.03	0.02	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00
EFR-17	0.04	0.17	1.58	0.39	0.17	0.98	-	0.09	-	-	0.37	0.29	0.46	0.58	0.71	0.53	0.28	0.08	0.08
EFR-18	0.10	0.10	0.08	-	-	-	-	-	-	0.01	0.08	0.14	0.48	0.88	0.88	1.08	0.58	0.11	-
EFR-19	0.54	2.80	1.89	0.49	1.95	1.63	1.44	0.88	0.65	0.42	0.80	1.28	1.68	1.95	2.31	2.44	1.83	1.68	0.52
EFR-20	0.40	0.34	0.95	0.47	0.27	-	-	0.04	0.24	0.37	0.85	0.63	0.79	1.24	1.85	2.11	0.65	1.33	0.88
EFR-21	2.38	2.40	2.71	2.74	2.74	4.14	3.97	4.23	3.98	3.29	1.87	1.87	1.88	1.77	1.87	1.82	1.21	1.43	2.62
EFR-22	3.78	4.10	0.05	4.81	3.40	4.89	3.42	1.82	1.22	0.98	2.88	2.87	2.97	2.83	2.58	2.27	2.08	0.84	0.34
EFR-23	0.00	0.06	0.08	-	0.02	-	-	-	-	0.05	0.11	0.08	-	0.27	1.03	3.07	2.29	1.56	0.47
EFR-24	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-	0.00	0.03	0.12	0.14	0.38	0.08	0.00
EFR-25	2.95	3.00	3.55	0.28	4.15	3.11	0.72	0.82	0.79	0.78	0.80	0.41	0.29	0.41	1.33	1.58	1.05	1.75	1.19
EFR-26	2.20	2.05	2.88	0.29	2.30	2.12	1.43	1.32	1.95	1.21	2.08	1.58	1.17	1.24	1.08	1.09	0.73	0.55	0.45
EFR-27	0.15	0.02	2.71	0.02	0.74	-	-	0.03	-	0.02	0.33	0.45	1.49	0.54	0.47	0.51	0.09	0.12	0.00
EFR-28	2.20	2.30	1.78	0.48	2.80	3.20	3.48	4.40	3.18	2.81	1.47	1.73	1.69	1.83	1.79	1.74	1.03	1.29	1.71
MIN (ft)	0.00	0.00	0.00	0.02	0.02	0.08	0.03	0.03	0.02	0.01	0.02	0.03	0.03	0.03	0.07	0.03	0.02	0.04	0.00
MAX (ft)	5.20	5.80	8.42	5.64	7.47	7.08	6.05	6.71	5.73	8.08	4.94	4.52	4.34	4.38	3.88	3.89	3.88	5.79	8.15
Average (ft)	1.20	1.44	1.55	1.17	1.92	2.79	2.21	2.01	1.94	1.28	1.22	1.23	1.38	1.34	1.47	1.48	0.87	1.26	1.22
Total Free Product (ft)	33.89	40.30	43.38	19.84	44.05	44.88	33.10	38.24	31.07	31.18	30.38	30.73	33.80	34.82	38.30	38.38	25.27	31.14	31.84
Total Standing Free Product Volume (gal)	21.60	25.63	27.79	12.78	28.24	28.64	21.22	23.23	19.92	19.97	19.47	19.70	22.04	22.70	24.90	24.93	16.43	20.24	20.70
Estimated Total Free Product Removed (gal) ⁽¹⁾ (Liquid and Vapor Phase Free Product Volume)	315.00	250.00	210.00	80.00	120.00	130.00	100.00	110.00	95.00	105.00	78.00	55.00	60.00	15.00	25.00	51.00	23.00	74.00	40.00
Estimated Total Fluids Removed (gal) (Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000																			
Vapor Phase Free Product Extraction Volume (gal) as of Jan 2000																			
Liquid Phase Free Product Extraction Volume (gal) as of Jan 2000																			
Groundwater Extraction Volume (gal) per each EFR Event ⁽⁷⁾ as of Jan 2000																			
Total EFR Extraction Volume (gal) (Total Volume: free product + groundwater + product vapor)	2350.00	1410.00	378.00	258.00	314.00	300.00	338.00	403.00	390.00	561.00	211.00	220.00	329.00	212.00	120.00	256.00	234.00	498.00	683.00
Estimated Volume Removed Resulting from Drum Purging (GW purge water) if applicable ⁽⁸⁾						338	150	600	70	110	71		110			110		235	
Total Volume Removed from Site (gal) (Manifested volume) ⁽⁹⁾	2,350	1,410	378	258	314	638	489	1,003	460	671	282	220	439	212	120	256	234	733	683
Cumulative Total Free Product Removed (gal)	315	565	775	855	975	1,105	1,205	1,315	1,410	1,515	1,591	1,648	1,708	1,721	1,746	1,797	1,820	1,894	1,934
Extraction, Transportation & Disposal Cost ⁽²⁾	\$ 3,978.37	\$ 2,742.82	\$ 1,130.50	\$ 1,130.50	\$ 1,219.12	\$ 1,431.87	\$ 1,541.31	\$ 2,038.43	\$ 1,240.75	\$ 1,347.88	\$ 1,324.82	\$ 1,838.93	\$ 1,383.16	\$ 915.25	\$ 863.25	\$ 973.00	\$ 1,156.62	\$ 1,841.58	\$ 1,703.44
Unit Cost per gal ⁽²⁾	\$ 1.09	\$ 1.95	\$ 3.01	\$ 4.42	\$ 3.88	\$ 2.24	\$ 3.15	\$ 2.03	\$ 2.70	\$ 2.01	\$ 4.70	\$ 8.36	\$ 3.15	\$ 4.32	\$ 7.19	\$ 3.80	\$ 4.94	\$ 2.24	\$ 2.49
State Manifest Document Number	NJA2788098	NJA2788105	NJA2787308	NJA2785935	NJA2785830	NJA2785548	NJA2788541	NJA2787847	NJA2788596	NJA2970479	NJA2988712	NJA2988448	NJA2988517	NJA2988962	NJA2988073	NJA2988998	NJA3017471	NJA3030488	NJA3018902

Notes:

Product thickness was determined prior to the EFR event.
gal = gallon

All EFR Wells are 4 inch in diameter

EFR events 13 and 14 product removal was low due to significant quantities of product remaining emulsified

as the result of a short vac truck standing time prior to gauging

Product removal estimate does not take into account a % of product remaining emulsified due to high agitation
 [REDACTED] indicates that this data will be known once the next EFR waste T&D event is performed

(1) Estimated free product (gal) based on Vacuum Truck gauging (interface probe) directly after each EFR Event and vapor monitoring during extraction (See Table 3)

(2) Total invoiced disposal cost for EFR event (product and groundwater) and monitoring well purge water from 1/4" well development and monitoring activities (if applicable)

(3) Total Cost per gallon includes product transportation & disposal, manifest prep. & regulatory admin. fee for combined EFR and GW purge water volumes (if applicable)

(4) EFR # 11 free product volume was 55 gal and contained PCBs (approx. weight 450lbs total @ specific gravity of 8.18 lbs/gal). Disposal costs were significantly higher due to PCB content

(5) EFR # 23 cost and unit cost higher than normal due to additional vac truck trans and mob time. As the vac truck was broken when it reached the site, a 3 hour credit will be applied to next months EFR T&D bill.

(6) Free product stored in an on-site 550-gallon AST equipped with secondary containment. AST contents, along with groundwater resulting from well purge activities are drained and transported by CycleChem/CleanVenture every 90 days.

(7) Volume of groundwater collected during each EFR event. Volume estimated using an oil/water interface probe on the 55-gal extraction drum. On-Site measurement began 1st quarter of 2000.

(8) These volumes that are totaled over a specific period (beginning 1st quarter 2000) is that volume specific to each of the EFR event it represents.

(9) Estimated by subtracting the free product aqueous volume and extracted groundwater volume for each of the representative EFR events from the total removal volume manifested for a specific disposal event

(10) EFR events did not take place in January or February 2001 due to access issues caused by inclement weather.

Table 1
L.E. CARPENTER - Wharton, New Jersey
Free Product Recovery - EFR Well # 1 - 28

THROUGH 1ST QUARTER 2003

EFR Event Date	EFR #19	EFR #20	EFR #21	EFR #22	EFR #23 ⁽¹⁾	EFR #24	EFR #25	EFR #26	EFR #27	EFR #28	EFR #29	EFR #30	EFR #31	EFR #32	EFR #33	EFR #34	EFR #35	EFR #36	EFR #37
Well No.	April 19, 1999	May 18, 1999	June 22, 1999	July 28, 1999	August 27, 1999	September 22, 1999	October 27, 1999	November 30, 1999	December 16, 1999	January 28, 2000	February 18, 2000	March 24, 2000	April 19, 2000	May 16, 2000	June 16, 2000	July 18, 2000	August 17, 2000	September 18, 2000	October 25, 2000
Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product	Feet of Product
EFR-1	1.13	1.09	1.15	1.49	1.27	1.84	1.63	1.47	1.20	1.22	0.85	1.88	1.59	1.54	2.10	1.81	1.28	1.53	1.00
EFR-2	1.48	1.22	0.82	1.21	1.00	0.83	1.35	1.28	1.40	0.06	1.04	2.25	2.00	1.84	1.89	1.40	0.36	1.08	0.97
EFR-3	0.36	0.25	0.88	0.88	1.03	0.74	0.89	0.47	0.02	0.51	0.07	0.08	0.09	0.82	1.02	0.25	0.02	0.08	0.44
EFR-4	0.08	0.05	0.03	0.44	0.89	0.51	0.11	0.03	0.88	0.51	0.48	0.11	0.11	0.41	0.22	0.05	0.02	0.02	0.02
EFR-5	2.69	2.61	2.68	2.68	1.97	1.77	3.23	2.99	1.27	2.95	2.48	2.91	2.54	1.84	2.34	1.99	1.89	1.57	2.74
EFR-6	0.81	1.07	1.18	1.51	0.91	0.15	0.88	0.83	0.33	1.07	0.77	0.29	0.31	0.49	0.27	0.54	0.29	0.65	0.83
EFR-7	0.07	0.02	0.08	0.28	0.05	0.01	0.07	0.04	0.47	0.15	0.02	0.35	0.01	0.02	0.00	0.00	0.01	0.00	0.01
EFR-8	0.03	0.03	0.09	0.39	0.27	0.09	0.13	0.05	0.11	0.05	0.08	0.08	0.03	0.05	0.03	0.02	0.01	0.01	4.28
EFR-9	0.11	0.32	0.49	1.16	0.58	0.41	0.28	0.10	0.15	0.13	0.08	0.19	0.02	0.08	0.08	0.12	0.18	0.08	0.02
EFR-10	4.87	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	3.55	3.50	4.50	1.38	2.50	3.09	0.75	2.76	3.88
EFR-11	2.02	2.48	3.28	2.78	1.57	1.93	3.20	3.11	1.07	3.44	4.85	2.41	2.95	2.93	2.49	4.12	0.79	4.73	0.16
EFR-12	0.02	0.02	0.10	0.30	0.20	0.03	0.09	0.87	0.01	0.03	0.49	0.48	0.10	0.19	0.01	0.01	0.00	0.03	0.11
EFR-13	0.49	0.50	0.44	1.33	1.01	0.74	0.78	0.57	0.28	0.38	0.34	0.48	0.47	0.69	0.55	0.73	0.49	0.22	0.26
EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-15	0.01	0.00	0.00	0.00	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00
EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-17	0.08	0.08	0.12	0.39	0.36	0.10	0.06	0.24	0.28	0.11	0.32	0.04	0.18	0.65	0.04	0.01	0.02	0.09	0.08
EFR-18	0.08	0.18	0.46	0.96	1.37	0.81	0.38	0.77	0.05	0.20	0.05	0.12	0.04	0.32	0.01	0.08	0.16	0.08	0.31
EFR-19	0.44	0.52	1.10	2.05	2.02	0.51	1.54	0.84	0.69	1.67	1.73	0.25	0.80	0.98	0.17	0.63	0.34	0.22	0.87
EFR-20	0.43	0.89	0.87	1.69	1.88	0.47	1.92	1.38	0.75	1.08	2.58	0.84	0.42	0.54	0.33	0.30	0.39	0.45	0.54
EFR-21	2.35	1.49	1.48	1.57	1.04	1.01	2.32	1.40	1.70	1.92	1.34	3.04	2.88	2.47	3.02	2.09	1.82	2.76	1.78
EFR-22	0.95	1.39	1.83	1.47	1.41	0.17	2.22	1.78	0.53	0.82	0.58	0.09	0.18	0.05	0.05	0.01	0.18	0.08	0.53
EFR-23	0.22	0.25	0.45	2.13	1.03	0.12	0.53	0.64	0.24	0.23	0.31	0.48	0.08	0.06	0.01	0.13	0.03	0.07	0.07
EFR-24	0.00	0.00	0.08	0.08	0.05	0.00	0.00	0.04	0.13	0.11	0.07	0.58	0.02	0.03	0.00	0.00	0.00	0.01	0.01
EFR-25	1.08	0.78	0.54	1.74	1.48	0.21	0.39	0.19	0.05	0.31	0.39	0.58	0.21	0.10	0.03	0.10	0.03	0.10	0.19
EFR-26	0.75	1.29	1.28	1.23	0.72	0.29	0.52	0.94	0.59	1.64	1.10	1.33	1.68	2.02	1.44	2.25	1.38	2.01	2.05
EFR-27	0.00	0.02	0.03	0.17	0.21	0.08	0.01	0.01	0.01	0.02	0.14	0.20	0.01	0.03	0.04	0.01	0.01	0.15	0.01
EFR-28	1.85	1.48	1.25	1.87	1.78	0.38	2.19	0.98	1.42	1.33	1.00	2.30	2.42	1.81	2.88	1.72	2.46	2.02	1.39
MIN (ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX (ft)	4.87	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	4.85	3.50	4.50	2.93	3.02	4.12	2.48	4.73	4.28
Average (ft)	0.79	0.79	0.88	1.18	0.94	0.57	1.08	0.88	0.58	0.87	0.89	0.88	0.84	0.75	0.78	0.78	0.45	0.74	0.80
Total Free Product (ft)	22.00	22.20	24.54	33.11	28.38	15.94	29.68	24.59	18.37	24.34	24.79	24.62	23.38	20.81	21.30	21.14	12.49	20.87	22.51
Total Standing Free Product Volume (gal)	14.30	14.43	15.95	54.48	38.00	44.00	54.73	44.79	49.34	43.52	51.88	48.14	45.48	45.50	43.88	46.38	22.05	25.07	44.12
Estimated Total Free Product Removed (gal) ⁽¹⁾ (Liquid and Vapor Phase Free Product Volume)	59.24	47.20	38.51	54.48	38.00	44.00	54.73	44.79	49.34	43.52	51.88	48.14	45.48	45.50	43.88	46.38	22.05	25.07	44.12
Estimated Total Fluids Removed (gal) (Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000										40.93	46.21	52.80	41.28	40.18	39.44	40.43	20.13	21.05	38.78
Vapor Phase Free Product Extraction Volume (gal) as of Jan 2000										6.55	7.93	10.19	5.85	6.31	5.05	7.60	5.22	5.28	6.58
Liquid Phase Free Product Extraction Volume (gal) as of Jan 2000										38.97	43.73	37.95	39.81	39.19	38.81	38.78	16.83	19.81	37.54
Groundwater Extraction Volume (gal) per each EFR Event ⁽¹⁾ as of Jan 2000										3.08	2.48	14.85	1.85	0.99	0.83	1.85	3.30	1.24	1.24
Total EFR Extraction Volume (gal) (Total Volume: free product + groundwater + product vapor)	904.78	380.00	564.28	725.54	298.00	239.00	265.00	249.07	350.00	47.46	54.14	62.99	47.11	48.49	44.49	48.03	25.35	28.31	45.38
Estimated Volume Removed Resulting from Drum Purging (GW purge water) if applicable ⁽²⁾	139			374			199	82											
Total Volume Removed from Site (gal) (Manifested volume) ⁽²⁾	1,044	353	538	1,100	292	241	464	331	350										
Cumulative Total Free Product Removed (gal)	1,993	2,040	2,079	2,133	2,169	2,213	2,268	2,313	2,362	2,408	2,457	2,506	2,551	2,597	2,640	2,687	2,709	2,734	2,778
Extraction, Transportation & Disposal Cost ⁽²⁾	\$ 2,049.75	\$ 930.31	\$ 1,598.13	\$ 2,185.75	\$ 2,182.12	\$ 995.81	\$ 1,288.50	\$ 1,028.93	\$ 968.87	\$			\$ 1,045.82	\$				\$ 795.13	\$
Unit Cost per gal ⁽²⁾	\$ 1.98	\$ 2.64	\$ 2.97	\$ 1.97	\$ 7.40	\$ 4.13	\$ 2.78	\$ 3.11	\$ 2.77	\$			\$					\$	
State Manifest Document Number	NJA3015530	NJA3031178	NJA3016208	NJA3018543	NJA3022958	NJA2988892	NJA313015	NJA3030027	NJA3074974										

Table 1
L.E. CARPENTER - Wharton, New Jersey
Free Product Recovery - EFR Well # 1 - 28

THROUGH 1ST QUARTER 2003

EFR Event Date	EFR #36	EFR #39	EFR #40 ⁽¹⁾	EFR #41	EFR #42	EFR #43	EFR #44	EFR #45	EFR #46	EFR #47	EFR #48	EFR #49	EFR #50	EFR #51	EFR #52	EFR #53	EFR #54	EFR #55	EFR #56
Well No.	November 17, 2000 Feet of Product	December 15, 2000 Feet of Product	March 15, 2001 Feet of Product	April 23, 2001 Feet of Product	May 25, 2001 Feet of Product	June 13, 2001 Feet of Product	July 27, 2001 Feet of Product	August 24, 2001 Feet of Product	September 25, 2001 Feet of Product	October 25, 2001 Feet of Product	November 20, 2001 Feet of Product	December 31, 2001 Feet of Product	January 28, 2002 Feet of Product	February 20, 2002 Feet of Product	March 28, 2002 Feet of Product	April 10, 2002 Feet of Product	May 6, 2002 Feet of Product	June 13, 2002 Feet of Product	July 15, 2002 Feet of Product
EFR-1	1.07	1.14	2.91	1.25	1.02	1.14	0.57	0.80	1.29	1.60	1.51	1.57	2.07	1.93	0.80	0.77	1.80	1.82	0.85
EFR-2	1.09	0.76	2.92	2.98	1.75	2.28	1.22	1.17	1.22	1.14	1.15	1.19	1.37	1.33	1.40	1.20	2.39	2.15	1.33
EFR-3	0.43	0.48	0.33	0.29	0.49	0.70	0.40	0.88	0.51	0.81	0.78	0.80	0.70	0.78	1.05	1.09	1.28	1.53	0.25
EFR-4	0.05	0.21	0.59	1.85	0.01	0.44	0.02	1.88	0.11	0.67	0.88	0.84	0.28	1.13	0.37	0.89	0.98	1.07	1
EFR-5	2.47	2.76	5.95	1.75	1.80	0.62	2.24	2.05	2.25	2.55	2.10	2.67	2.66	2.68	3.50	3.07	3.25	2.17	2.01
EFR-6	0.79	0.86	2.05	0.32	0.43	0.18	0.48	0.49	0.37	1.13	1.68	1.23	0.71	2.21	2.30	0.77	0.43	0.27	0.54
EFR-7	0.01	0.01	0.28	0.02	0.02	0.00	0.00	0.16	0.00	0.05	0.08	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-8	0.02	0.08	0.03	0.05	0.04	0.03	0.01	0.18	0.00	0.18	0.18	0.22	0.01	0.04	0.00	0.10	0.05	0.07	0
EFR-9	0.50	0.77	0.57	0.07	0.58	0.07	0.14	0.27	0.39	0.58	0.85	0.32	0.29	0.45	0.32	0.32	0.28	0.11	0.35
EFR-10	3.27	4.05	5.84	3.17	3.52	3.32	3.73	2.30	2.82	2.70	2.81	2.81	2.02	3.32	3.48	2.77	2.84	3.39	3.18
EFR-11	4.00	3.73	2.82	2.41	3.58	2.80	3.91	2.37	3.86	3.22	2.44	2.90	2.89	2.58	2.12	0.89	0.87	1.01	1.54
EFR-12	0.04	0.02	0.07	0.02	0.25	0.01	0.01	0.23	0.00	0.00	0.34	0.21	0.28	0.11	0.10	0.15	0.00	0.08	0.30
EFR-13	0.08	0.15	1.14	0.27	0.78	0.28	0.39	0.47	0.38	0.48	0.88	0.44	0.84	0.44	0.87	0.88	1.71	1.11	0.55
EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-15	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.20
EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EFR-17	0.38	0.01	0.41	0.31	0.51	0.28	0.02	0.49	0.34	0.85	0.97	1.67	1.43	2.23	1.90	0.77	0.75	0.80	0.43
EFR-18	0.31	0.20	3.27	1.35	0.43	0.31	0.01	0.13	0.41	0.69	0.75	1.22	1.80	1.00	1.07	0.81	0.80	0.05	0.32
EFR-19	0.59	1.42	2.32	0.85	1.98	1.01	0.44	1.19	0.54	2.15	2.36	2.38	2.28	3.22	2.90	2.69	1.34	0.85	1.82
EFR-20	0.11	0.37	0.24	0.97	0.52	0.31	0.08	0.32	0.24	0.73	1.10	1.29	1.78	0.48	1.24	1.24	1.74	2.03	1.82
EFR-21	1.65	1.37	4.09	3.51	2.98	2.81	1.88	1.81	1.87	1.68	1.38	1.54	1.51	1.60	2.25	1.65	2.11	2.81	1.88
EFR-22	2.14	1.80	0.81	0.08	0.43	0.00	0.00	0.47	0.57	1.22	1.53	1.83	0.88	0.83	0.80	0.39	0.18	0.19	0.32
EFR-23	0.08	0.39	0.07	0.03	0.88	0.28	0.05	0.34	0.07	0.85	2.87	0.75	0.88	1.13	0.01	0.70	0.67	0.52	0.80
EFR-24	0.01	0.04	2.27	0.05	0.34	0.01	0.01	0.27	0.14	0.35	0.38	0.34	0.47	2.85	0.80	1.35	0.33	0.24	1.18
EFR-25	0.12	0.10	0.04	0.39	0.28	0.14	0.03	0.47	0.09	0.43	0.63	0.84	0.82	0.89	0.75	1.21	0.33	0.29	0.36
EFR-26	1.78	1.10	2.84	2.58	2.88	1.48	2.24	1.07	1.20	1.45	1.22	1.13	1.14	0.87	1.55	1.67	1.83	1.92	2.42
EFR-27	0.01	0.01	0.48	0.05	0.04	0.00	0.01	0.04	0.00	0.52	0.49	0.13	0.53	0.32	0.09	0.38	0.38	1.31	1.10
EFR-28	1.38	0.84	2.81	2.75	1.88	2.34	1.38	1.87	1.05	1.50	1.38	1.51	1.67	1.88	0.21	0.63	0.29	0.35	1.08
MIN (ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAX (ft)	4.00	4.08	5.95	3.51	3.58	3.32	3.91	2.37	3.86	3.22	2.87	2.91	2.89	3.32	3.50	3.07	3.25	3.39	3.18
Average (ft)	0.80	0.79	1.80	0.85	0.97	0.73	0.89	0.75	0.70	0.97	1.07	1.08	1.08	1.21	1.06	0.93	0.93	0.92	0.90
Total Free Product (ft)	22.35	22.23	44.78	28.82	27.24	20.38	19.33	21.08	19.52	27.29	30.01	29.87	29.55	33.88	29.81	26.91	28.11	25.82	25.11
Total Standing Free Product Volume (gal)	14.53	14.45	28.09	17.30	17.71	13.25	12.56	13.70	12.69	17.74	19.51	19.29	19.21	22.01	19.38	18.84	18.97	18.78	18.32
Estimated Total Free Product Removed (gal) ⁽¹⁾ (Liquid and Vapor Phase Free Product Volume)	35.38	49.32	79.06	46.44	58.75	37.50	40.38	37.70	27.86	28.54	31.09	29.38	32.48	33.28	29.73	31.72	28.10	29.15	25.59
Estimated Total Fluids Removed (gal) (Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000	31.36	43.73	74.01	40.01	51.15	31.23	38.30	33.00	25.58	25.18	28.40	23.83	24.75	28.40	25.18	28.05	28.40	28.05	25.58
Vapor Phase Free Product Extraction Volume (gal) as of Jan 2000	5.85	6.42	11.08	8.49	8.90	7.50	6.53	6.35	4.78	8.28	7.99	7.91	9.38	8.53	6.63	6.15	5.00	6.05	2.49
Liquid Phase Free Product Extraction Volume (gal) as of Jan 2000	29.71	42.90	68.00	37.95	47.85	30.00	33.83	31.35	23.10	22.28	23.10	21.45	23.10	24.75	23.10	25.58	23.10	23.10	23.10
Groundwater Extraction Volume (gal) per each EFR Event ⁽⁷⁾ as of Jan 2000	1.65	0.83	8.01	2.08	3.30	1.24	2.48	1.85	2.48	2.89	3.30	2.48	1.65 *	1.85	2.08	2.48	3.30	4.95	2.48
Total EFR Extraction Volume (gal) (Total Volume: free product + groundwater + product vapor)	37.01	50.15	85.07	48.50	60.05	38.73	42.84	39.35	30.34	31.42	34.39	31.84	34.13	34.93	31.79	34.21	31.40	34.10	28.07
Estimated Volume Removed Resulting from Drum Purging (GW purge water) if applicable ⁽⁸⁾			148			298			90				0				142		
Total Volume Removed from Site (gal) (Manifested volume) ⁽⁸⁾			308			415			200				190				250		
Cumulative Total Free Product Removed (gal)	2,813	2,883	2,942	2,988	3,045	3,082	3,123	3,160	3,188	3,217	3,248	3,277	3,310	3,343	3,373	3,404	3,433	3,462	3,487
Extraction, Transportation & Disposal Cost ⁽²⁾	782.31																		
Unit Cost per gal ⁽²⁾	3.39																		
State Manifest Document Number			NJA3239138			NJA3288383			NJA4039830				NJA4035384					NJA4035982	

Table 1
L.E. CARPENTER - Wharton, New Jersey
Free Product Recovery - EFR Well # 1 - 28

THROUGH 1ST QUARTER 2003

EFR Event Date	EFR #57	EFR #58	EFR #59	EFR #60	EFR #61	EFR #62	EFR #63	EFR #64	EFR AVERAGES	EFR TOTALS
Well No.	August 9, 2002 Feet of Product	September 13, 2002 Feet of Product	October 8, 2002 Feet of Product	November 7, 2002 Feet of Product	December 17, 2002 Feet of Product	March 11, 2003 Feet of Product	March 17, 2003 Feet of Product	March 21, 2003 Feet of Product		
EFR-1	0.81	1.14	0.83	1.62	1.33	0.88	0.22	0.41		
EFR-2	1.02	0.09	1.27	2.88	3.07	1.98	0.94	1.02		
EFR-3	0.89	0.81	0.91	0.88	0.88	0.70	0.30	0.20		
EFR-4	0.28	0.11	0.43	2.88	0.62	0	0	0		
EFR-5	2.00	2.05	1.87	1.68	0.37	2.91	1.19	0.16		
EFR-6	0.45	0.62	0.38	3.14	1.63	0.27	0.29	0.27		
EFR-7	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00		
EFR-8	0.14	0.28	0.18	0.1	0.25	0.37	0.27	0.23		
EFR-9	0.30	0.19	0.32	0.33	0.25	0.24	0.02	0.32		
EFR-10	2.31	2.83	1.95	2.70	2.78	2.45	0.84	0.28		
EFR-11	2.08	3.91	2.08	1.88	1.87	2.62	4.89	3.63		
EFR-12	0.08	0.33	0.25	0.24	0.84	0.58	0.49	0.62		
EFR-13	0.28	0.61	0.30	0.55	0.88	0.08	0.11	0.28		
EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
EFR-15	0.00	0.09	0.00	0.28	0.00	0.00	0.00	0.00		
EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
EFR-17	0.67	1.50	0.71	1.10	1.07	0.18	0.03	0.00		
EFR-18	0.02	1.58	0.21	0.04	0.84	1.32	1.31	0.04		
EFR-19	1.85	2.55	0.35	1.30	1.03	0.40	0.80	0.31		
EFR-20	1.88	1.85	1.47	1.77	2.45	2.30	1.88	1.33		
EFR-21	1.48	0.02	0.44	0.00	0.00	0.01	2.43	1.95		
EFR-22	0.11	0.22	1.39	1.09	0.78	2.80	0.54	0.00		
EFR-23	0.38	0.77	0.63	0.81	0.87	0.82	0.06	0.50		
EFR-24	0.19	0.13	0.18	0.01	0.00	0.00	0.00	0.00		
EFR-25	0.25	0.38	0.28	0.33	0.89	0.14	0.09	0.05		
EFR-26	1.89	1.24	0.59	0.28	0.40	0.33	0.27	0.30		
EFR-27	0.04	1.43	2.53	1.77	3.10	2.48	0.00	0.00		
EFR-28	0.38	1.22	0.22	0.14	0.28	1.04	0.30	0.81		
MIN (ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
MAX (ft)	2.31	3.91	2.53	3.14	3.10	2.91	4.89	3.83		
Average (ft)	0.88	0.93	0.89	1.00	0.91	0.87	0.81	0.45		
Total Free Product (ft)	19.01	25.91	19.43	27.88	25.84	24.47	17.07	12.59		
Total Standing Free Product Volume (gal)	12.38	18.84	12.83	18.11	18.80	15.91	11.10	8.18		
Estimated Total Free Product Removed (gal) ⁽¹⁾ (Liquid and Vapor Phase Free Product Volume)	28.19	39.55	28.87	25.88	27.22	38.50	30.39	17.21	57	3,721
Estimated Total Fluids Removed (gal) (Liquid Phase Free Product Volume plus Groundwater Extraction Volume) as of Jan 2000	24.75	37.13	31.02	28.05	28.05	38.78	31.35	17.33	34	1,244
Vapor Phase Free Product Extraction Volume (gal) as of Jan 2000	3.51	6.55	1.83	1.74	1.84	1.38	1.51	0.71	6	218
Liquid Phase Free Product Extraction Volume (gal) as of Jan 2000	22.89	33.00	28.73	23.93	25.58	37.13	28.88	16.50	31	1,141
Groundwater Extraction Volume (gal) per each EFR Event ⁽⁷⁾ as of Jan 2000	2.08	4.13	4.29	4.13	2.48	1.85	2.48	0.83	3	103
Total EFR Extraction Volume (gal) (Total Volume: free product + groundwater + product vapor)	28.28	43.68	32.95	29.80	29.70	40.16	32.87	18.04	229	14,879
Estimated Volume Removed Resulting from Drum Purging (GW purge water) if applicable ⁽⁸⁾	0								176	3,865
Total Volume Removed from Site (gal) (Manifested volume) ⁽⁹⁾	105								493	18,248
Cumulative Total Free Product Removed (gal)	3,513	3,553	3,582	3,607	3,635	3,673	3,703	3,721	N/A	3,721
Extraction, Transportation & Disposal Cost ⁽²⁾	\$ 851.00								\$ 1,281.78	\$ 51,215.42
Unit Cost per gal ⁽³⁾	\$ 8.10								\$ 3.72	N/A
State Manifest Document Number	NJ4088029 (11)								N/A	N/A

Once the extraction apparatus is full (approximately 55-gallons), the free product and limited volume of groundwater are transferred to the on-site 550-gallon aboveground storage tank (AST) equipped with secondary containment for satellite storage. The fluids generated during EFR events, including purged groundwater generated during groundwater monitoring activities, are transported off-site by Clean Venture, Inc. (US EPA ID No. NJ0000027193) and managed by Cycle Chem, Inc. (USEPA ID No. NJD002200046) at their facility located in Elizabeth, New Jersey. During first quarter 2003, 105 gallons of waste fluids were transported off-site on February 10, 2003 (State Manifest Document No. NJA4068029).

2.2 Apparent Free Product Trends

The following sections describe apparent product trends in the western, west-central, east-central, and eastern portions of the free product area. Apparent product refers to a volume (in gallons) of free product occupying the casings of each EFR well. As described in the following sections, "total volume of apparent free product" represents the sum of product volumes from each EFR well within each of the four segregated regions.

The apparent product thickness is not representative of the actual free product thickness or volume that exists within the formation outside of the well casing. RMT previously evaluated actual free product thickness and volume in our report entitled Free Product Volume Analysis (May 2000). That report estimated a total volume of recoverable free product actually present in the subsurface to be between at 8,000 and 13,000 gallons. To facilitate description of the current distribution of free product, the zone of free product occurrence has been divided into four sub areas. These four areas discussed from west to east are:

2.2.1 Western Region of Free Product

In the western portion of the free product area (EFR wells 1, 2, 3, 17, 18, 20, 21, and 28), there was a decrease in the total volume of apparent free product measured during the first quarter of 2003. This is most likely attributed to the fact that the recovery time between each event was a week as apposed to a month. The overall apparent free product volume in the western region appears to be decreasing since LEC initiated EFR in November 1997 (Appendix B).

2.2.2 West-Central Region of Free Product

In the western-central portion of the free product area (EFR wells 4, 5, 6, 7, 19, 22, 23, 24, 25, 26, and 27), there was a decrease in the total volume of apparent free product measured during the first quarter of 2003. This is most likely attributed to the fact that the recovery time between each event was a week as apposed to a month. The overall

apparent free product volume in the west-central region appears to be decreasing since LEC initiated EFR in November 1997 (Appendix B).

2.2.3 East-Central Region of Free Product

In the east-central portion of the free product area (EFR wells 8, 9, 10, 11, 12, and 13), there was a decrease in the total volume of apparent free product measured during the first quarter of 2003. This is most likely attributed to the fact that the recovery time between each event was a week as apposed to a month. The overall apparent free product volume in the eastern-central region appears to be decreasing since LEC initiated EFR in November 1997 (Appendix B).

2.2.4 Eastern Region of Free Product

During first quarter 2003, 0.54 feet of free product was measured in MW-3 in the eastern portion of the free product area.

2.2.5 Site Total Apparent Free Product Area

In general, the total apparent free product trend chart indicates a general decrease in the volume of apparent free product existing on-site. A cumulative breakdown of free product thickness and apparent free product volumes specific to each region is presented in Table 2. Additionally, trend charts for each of the four free product regions, and for the site as a whole, that graphically display apparent free product volume fluctuations over time are presented in Appendix B. Figure 3 shows iso-thickness contours and the lateral extent of apparent free product on-site during first quarter 2003. This figure incorporates the apparent free product thickness measurements from the groundwater monitoring event conducted by RMT on March 18, 2003 and the pre-EFR event measurements obtained by CEMCO on March 17, 2003.

TABLE 2
L.E. CARPENTER - WHARTON, NEW JERSEY
REGIONAL APPARENT FREE PRODUCT TRENDS

THROUGH 1ST QUARTER 2003

EFR Event Date		21-Nov-97	9-Dec-97	7-Jan-98	16-Feb-98	16-Mar-98	27-Mar-98	24-Apr-98	29-May-98	30-Jun-98	31-Jul-98	24-Aug-98	17-Sep-98	22-Oct-98	20-Nov-98	18-Dec-98	13-Jan-99	17-Feb-99
Western Region of Free Product	EFR-1	1.64	1.53	1.94	2.48	0.93	0.94	1.42	1.55	2.11	1.28	1.22	1.71	1.59	1.71	1.57	0.53	1.79
	EFR-2	1.55	1.50	1.86	2.20	2.96	2.92	2.65	2.44	1.78	1.12	1.09	1.21	1.29	1.51	1.41	0.95	1.40
	EFR-3	0.85	1.02	1.27	1.58	1.19	0.03	0.24	0.19	0.77	0.72	0.93	1.03	1.01	1.19	1.18	1.14	1.01
	EFR-17	0.04	0.17	1.56	0.17	0.08	0.00	0.09	0.00	0.02	0.37	0.29	0.46	0.56	0.71	0.53	0.26	0.08
	EFR-18	0.10	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.14	0.48	0.68	0.98	1.08	0.56	0.11
	EFR-20	0.40	0.34	0.95	0.27	0.00	0.00	0.04	0.24	0.37	0.65	0.63	0.79	1.24	1.85	2.11	0.65	1.33
	EFR-21	2.36	2.40	2.71	2.74	4.14	3.97	4.23	3.98	3.29	1.97	1.87	1.86	1.77	1.67	1.62	1.21	1.43
	EFR-28	2.20	2.30	1.78	2.60	3.20	3.48	4.40	3.16	2.61	1.47	1.73	1.69	1.83	1.79	1.74	1.03	1.29
	Total Free Product (ft)	9.14	9.36	12.16	12.04	12.50	11.34	13.07	11.56	10.96	7.66	7.90	9.23	9.97	11.41	11.24	6.33	8.44
	Total Free Product (gal)	5.86	6.00	7.79	7.72	8.01	7.27	8.38	7.41	7.03	4.91	5.06	6.00	6.48	7.42	7.31	4.11	5.49
West-Central Region of Free Product	EFR-4	1.03	2.27	0.54	0.30	0.00	0.00	0.00	0.00	0.03	0.38	1.23	2.40	2.17	1.75	1.79	0.73	0.10
	EFR-5	4.03	3.74	4.25	3.29	3.39	1.71	2.71	2.02	1.86	2.38	2.52	2.33	2.52	2.19	2.28	2.68	3.47
	EFR-6	0.72	1.00	1.24	2.27	1.71	1.17	2.23	1.55	1.56	1.96	1.56	1.42	1.25	1.29	1.38	0.49	0.84
	EFR-7	0.17	0.09	0.16	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.07	0.05	0.20	0.16	0.02	0.04
	EFR-19	0.54	2.80	1.89	1.95	1.63	1.44	0.88	0.65	0.42	0.90	1.26	1.68	1.95	2.31	2.44	1.83	1.68
	EFR-22	3.78	4.10	0.05	3.40	4.69	3.42	1.82	1.22	0.96	2.86	2.87	2.97	2.83	2.58	2.27	2.06	0.84
	EFR-23	0.00	0.06	0.06	0.02	0.00	0.00	0.00	0.00	0.05	0.11	0.08	0.27	1.03	3.07	2.29	1.55	0.91
	EFR-24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.03	0.12	0.14	0.38	0.06
	EFR-25	2.95	3.00	3.55	4.15	3.11	0.72	0.82	0.79	0.78	0.60	0.41	0.29	0.41	1.33	1.58	1.05	1.75
	EFR-26	2.20	2.05	2.66	2.30	2.12	1.43	1.32	1.95	1.21	2.06	1.58	1.17	1.24	1.08	1.09	0.73	0.55
	EFR-27	0.15	0.02	2.71	0.74	0.00	0.00	0.03	0.00	0.02	0.33	0.45	1.49	0.54	0.47	0.51	0.09	0.12
	Total Free Product (ft)	15.57	19.13	17.11	18.42	16.65	9.89	9.81	8.18	6.91	11.60	11.99	14.09	14.02	16.39	15.93	11.61	10.36
	Total Free Product (gal)	9.98	12.26	10.97	11.81	10.67	6.34	6.29	5.24	4.43	7.44	7.69	9.16	9.11	10.65	10.35	7.55	6.73
East-Central Region of Free Product	EFR-8	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.03	0.04	0.08	0.13	0.09	0.07	0.03	0.12	0.00
	EFR-9	0.00	1.10	1.79	0.16	3.08	0.08	0.07	0.11	0.29	0.61	0.98	1.23	1.31	1.26	1.86	0.74	0.49
	EFR-10	5.20	5.80	6.42	7.47	7.06	6.05	6.71	5.47	5.68	4.94	4.52	4.34	4.38	3.98	3.99	3.68	5.79
	EFR-11	3.07	4.04	4.28	4.47	4.32	4.67	5.91	5.73	6.08	4.73	4.47	3.95	4.06	3.65	3.52	2.42	4.69
	EFR-12	0.04	0.03	0.00	0.07	0.00	0.00	0.00	0.02	0.28	0.22	0.28	0.24	0.15	0.29	0.17	0.04	0.11
	EFR-13	0.48	0.56	1.33	1.28	1.07	1.07	0.67	0.00	0.90	0.56	0.48	0.66	0.82	1.13	1.30	0.22	1.19
	Total Free Product (ft)	8.79	11.53	13.82	13.53	15.53	11.87	13.36	11.33	13.26	11.10	10.81	10.55	10.81	10.38	10.87	7.22	12.27
	Total Free Product (gal)	5.63	7.39	8.86	8.67	9.95	7.61	8.56	7.26	8.50	7.12	6.93	6.86	7.03	6.75	7.07	4.69	7.98
Eastern Region of Free Product	EFR-14	0.10	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-15	0.09	0.12	0.27	0.06	0.00	0.00	0.00	0.00	0.03	0.02	0.03	0.03	0.12	0.12	0.32	0.11	0.07
	EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Free Product (ft)	0.19	0.28	0.27	0.06	0.00	0.00	0.00	0.00	0.03	0.02	0.03	0.03	0.12	0.12	0.32	0.11	0.07
TOTAL APPARENT FREE PRODUCT VOLUME (GAL)		21.60	25.83	27.79	28.24	28.64	21.22	23.23	19.92	19.97	19.47	19.70	22.03	22.70	24.89	24.93	16.42	20.24

TABLE 2
L.E. CARPENTER - WHARTON, NEW JERSEY
REGIONAL APPARENT FREE PRODUCT TRENDS

THROUGH 1ST QUARTER 2003

EFR Event Date		23-Mar-99	19-Apr-99	18-May-99	22-Jun-99	28-Jul-99	27-Aug-99	22-Sep-99	27-Oct-99	30-Nov-99	16-Dec-99	28-Jan-00	18-Feb-00	24-Mar-00	19-Apr-00	18-May-00	16-Jun-00	18-Jul-00
Western Region of Free Product	EFR-1	3.68	1.13	1.09	1.15	1.49	1.27	1.94	1.63	1.47	1.20	1.22	0.85	1.86	1.59	1.54	2.10	1.51
	EFR-2	2.42	1.46	1.22	0.92	1.21	1.00	0.63	1.35	1.28	1.40	0.06	1.04	2.25	2.00	1.64	1.89	1.40
	EFR-3	1.63	0.36	0.25	0.86	0.88	1.03	0.74	0.69	0.47	0.02	0.51	0.07	0.08	0.09	0.62	1.02	0.25
	EFR-17	0.06	0.06	0.08	0.12	0.39	0.36	0.10	0.06	0.24	0.25	0.11	0.32	0.04	0.16	0.65	0.04	0.01
	EFR-18	0.00	0.06	0.16	0.46	0.96	1.37	0.61	0.36	0.77	0.05	0.20	0.05	0.12	0.04	0.32	0.01	0.06
	EFR-20	0.88	0.43	0.89	0.87	1.59	1.86	0.47	1.92	1.36	0.75	1.08	2.58	0.64	0.42	0.54	0.33	0.30
	EFR-21	2.62	2.35	1.49	1.46	1.57	1.04	1.01	2.32	1.40	1.70	1.92	1.34	3.04	2.86	2.47	3.02	2.09
	EFR-28	1.71	1.65	1.46	1.25	1.67	1.78	0.38	2.19	0.96	1.42	1.33	1.00	2.30	2.42	1.81	2.68	1.72
	Total Free Product (ft)	13.00	7.50	6.64	7.09	9.76	9.71	5.88	10.52	7.95	6.79	6.43	7.25	10.33	9.58	9.59	11.09	7.34
	Total Free Product (gal)	8.45	4.88	4.32	4.61	6.34	6.31	3.82	6.84	5.17	4.41	4.18	4.71	6.71	6.23	6.23	7.21	4.77
West-Central Region of Free Product	EFR-4	0.14	0.08	0.05	0.03	0.44	0.99	0.51	0.11	0.03	0.58	0.51	0.48	0.11	0.11	0.41	0.22	0.05
	EFR-5	6.15	2.65	2.61	2.66	2.66	1.57	1.77	3.23	2.99	1.27	2.95	2.46	2.91	2.54	1.84	2.34	1.99
	EFR-6	0.88	0.61	1.07	1.16	1.51	0.91	0.15	0.88	0.63	0.33	1.07	0.77	0.29	0.31	0.49	0.27	0.54
	EFR-7	0.04	0.07	0.02	0.08	0.28	0.05	0.01	0.07	0.04	0.47	0.15	0.02	0.35	0.01	0.02	-	-
	EFR-19	0.52	0.44	0.52	1.10	2.05	2.02	0.51	1.54	0.84	0.69	1.67	1.73	0.25	0.60	0.98	0.17	0.63
	EFR-22	0.34	0.95	1.39	1.93	1.47	1.41	0.17	2.22	1.76	0.53	0.82	0.58	0.09	0.16	0.05	0.05	0.01
	EFR-23	0.47	0.22	0.25	0.45	2.13	1.03	0.12	0.53	0.64	0.24	0.23	0.31	0.46	0.06	0.06	0.01	0.13
	EFR-24	0.00	0.00	0.00	0.08	0.08	0.05	0.00	0.00	0.04	0.13	0.11	0.07	0.58	0.02	0.03	-	-
	EFR-25	1.19	1.08	0.76	0.54	1.74	1.48	0.21	0.39	0.19	0.05	0.31	0.39	0.58	0.21	0.10	0.03	0.10
	EFR-26	0.45	0.75	1.29	1.28	1.23	0.72	0.29	0.52	0.94	0.59	1.54	1.10	1.33	1.68	2.02	1.44	2.25
	EFR-27	0.00	0.00	0.02	0.03	0.17	0.21	0.06	0.01	0.01	0.01	0.02	0.14	0.20	0.01	0.03	0.04	0.01
	Total Free Product (ft)	10.18	6.85	7.98	9.34	13.76	10.44	3.80	9.48	8.11	4.89	9.38	8.05	7.15	5.71	6.03	4.57	5.71
	Total Free Product (gal)	6.62	4.45	5.19	6.07	8.94	6.79	2.47	6.16	5.27	3.18	6.10	5.23	4.65	3.71	3.92	2.97	3.71
East-Central Region of Free Product	EFR-8	0.03	0.03	0.03	0.09	0.39	0.27	0.09	0.13	0.05	0.11	0.05	0.06	0.08	0.03	0.05	0.03	0.02
	EFR-9	0.06	0.11	0.32	0.49	1.16	0.56	0.41	0.28	0.10	0.15	0.13	0.08	0.19	0.02	0.06	0.06	0.12
	EFR-10	5.52	4.97	4.23	3.71	3.63	2.47	3.02	5.18	3.95	3.07	4.50	3.55	3.50	4.50	1.36	2.50	3.09
	EFR-11	2.84	2.02	2.48	3.28	2.78	1.57	1.93	3.20	3.11	1.07	3.44	4.95	2.41	2.95	2.93	2.49	4.12
	EFR-12	0.05	0.02	0.02	0.10	0.30	0.20	0.03	0.09	0.67	0.01	0.03	0.49	0.46	0.10	0.19	0.01	0.01
	EFR-13	0.15	0.49	0.50	0.44	1.33	1.01	0.74	0.78	0.57	0.26	0.36	0.34	0.48	0.47	0.69	0.55	0.73
	Total Free Product (ft)	8.65	7.64	7.58	8.11	9.59	6.08	6.22	9.66	8.45	4.67	8.51	9.47	7.12	8.07	5.28	5.64	8.09
	Total Free Product (gal)	5.62	4.97	4.93	5.27	6.23	3.95	4.04	6.28	5.49	3.04	5.53	6.16	4.63	5.25	3.43	3.67	5.26
Eastern Region of Free Product	EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-15	0.01	0.01	0.00	0.00	0.00	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.00
	EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Free Product (ft)	0.01	0.01	0.00	0.00	0.00	0.13	0.04	0.02	0.08	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.00
	Total Free Product (gal)	0.01	0.01	0.00	0.00	0.00	0.08	0.03	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
TOTAL APPARENT FREE PRODUCT VOLUME (GAL)		20.70	14.30	14.43	15.95	21.52	17.13	10.36	19.29	15.98	10.64	15.82	16.11	16.00	15.20	13.59	13.85	13.74

TABLE 2
L.E. CARPENTER - WHARTON, NEW JERSEY
REGIONAL APPARENT FREE PRODUCT TRENDS

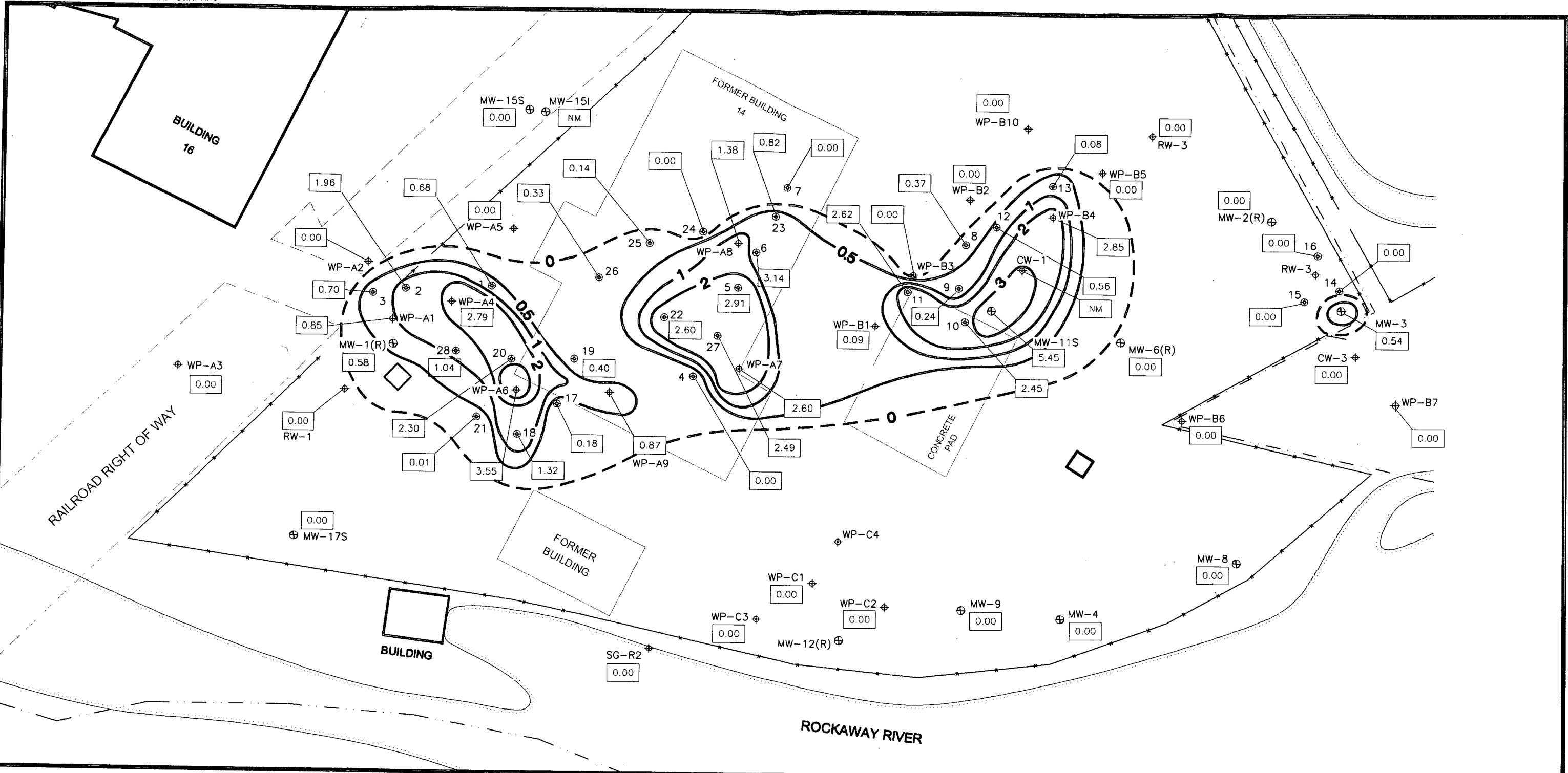
THROUGH 1ST QUARTER 2003

EFR Event Date		17-Aug-00	18-Sep-00	25-Oct-00	17-Nov-00	15-Dec-00	15-Mar-01	23-Apr-01	25-May-01	13-Jun-01	27-Jul-01	24-Aug-01	25-Sep-01	25-Oct-01	20-Nov-01	31-Dec-01	29-Jan-02	20-Feb-02
Western Region of Free Product	EFR-1	1.26	1.53	1.00	1.07	1.14	2.91	1.25	1.02	1.14	0.57	0.80	1.29	1.60	1.51	1.57	2.07	1.93
	EFR-2	0.36	1.08	0.97	1.09	0.76	2.92	2.66	1.75	2.26	1.22	1.17	1.22	1.14	1.15	1.19	1.37	1.33
	EFR-3	0.02	0.08	0.44	0.43	0.46	0.33	0.29	0.49	0.70	0.40	0.66	0.51	0.81	0.76	0.80	0.70	0.78
	EFR-17	0.02	0.09	0.06	0.36	0.01	0.41	0.31	0.51	0.28	0.02	0.49	0.34	0.85	0.97	1.57	1.43	2.23
	EFR-18	0.16	0.08	0.31	0.31	0.20	3.27	1.35	0.43	0.31	0.01	0.13	0.41	0.69	0.75	1.22	1.90	1.00
	EFR-20	0.39	0.45	0.54	0.11	0.37	0.24	0.97	0.52	0.31	0.08	0.32	0.24	0.73	1.10	1.29	1.78	0.46
	EFR-21	1.62	2.75	1.79	1.65	1.37	4.09	3.51	2.96	2.61	1.98	1.61	1.87	1.58	1.38	1.54	1.51	1.50
	EFR-28	2.48	2.02	1.39	1.36	0.64	2.81	2.75	1.86	2.34	1.36	1.67	1.05	1.50	1.38	1.51	1.67	1.86
	Total Free Product (ft)	6.31	8.08	6.50	6.38	4.95	16.98	13.09	9.54	9.95	5.64	6.85	6.93	8.90	9.00	10.69	12.43	11.09
	Total Free Product (gal)	4.10	5.25	4.23	4.15	3.22	11.04	8.51	6.20	6.47	3.67	4.45	4.50	5.79	5.85	6.95	8.08	7.21
West-Central Region of Free Product	EFR-4	0.02	0.02	0.02	0.05	0.21	0.59	1.65	0.01	0.44	0.02	1.86	0.11	0.57	0.68	0.54	0.26	1.13
	EFR-5	1.69	1.57	2.74	2.47	2.76	5.95	1.75	1.90	0.62	2.24	2.05	2.25	2.55	2.10	2.67	2.66	2.68
	EFR-6	0.29	0.55	0.83	0.79	0.96	2.05	0.32	0.43	0.16	0.46	0.49	0.37	1.13	1.56	1.23	0.71	2.21
	EFR-7	0.01	-	0.01	0.01	0.01	0.28	0.02	0.02	0.00	0.00	0.16	0.00	0.05	0.08	0.24	0.00	0.00
	EFR-19	0.34	0.22	0.87	0.59	1.42	2.32	0.65	1.98	1.01	0.44	1.19	0.54	2.15	2.36	2.38	2.26	3.22
	EFR-22	0.18	0.06	0.53	2.14	1.50	0.81	0.06	0.43	0.00	0.00	0.47	0.57	1.22	1.53	1.93	0.98	0.63
	EFR-23	0.03	0.07	0.07	0.08	0.39	0.07	0.03	0.88	0.28	0.05	0.34	0.07	0.85	2.67	0.75	0.98	1.13
	EFR-24	-	0.01	0.01	0.01	0.04	2.27	0.05	0.34	0.01	0.01	0.27	0.14	0.35	0.38	0.34	0.47	2.65
	EFR-25	0.03	0.10	0.19	0.12	0.10	0.04	0.39	0.28	0.14	0.03	0.47	0.09	0.43	0.63	0.64	0.82	0.99
	EFR-26	1.38	2.01	2.05	1.78	1.10	2.64	2.56	2.68	1.48	2.24	1.07	1.20	1.45	1.22	1.13	1.14	0.87
	EFR-27	0.01	0.15	0.01	0.01	0.01	0.48	0.05	0.04	0.00	0.01	0.04	0.00	0.52	0.49	0.13	0.53	0.32
	Total Free Product (ft)	3.98	4.76	7.33	8.05	8.50	17.50	7.53	8.99	4.14	5.50	8.41	5.34	11.27	13.70	11.98	10.81	15.83
	Total Free Product (gal)	2.59	3.09	4.76	5.23	5.53	11.38	4.89	5.84	2.69	3.58	5.47	3.47	7.33	8.91	7.79	7.03	10.29
East-Central Region of Free Product	EFR-8	0.01	0.01	0.16	0.02	0.06	0.03	0.05	0.04	0.03	0.01	0.18	0.00	0.18	0.16	0.22	0.01	0.04
	EFR-9	0.16	0.08	0.02	0.50	0.77	0.57	0.07	0.56	0.07	0.14	0.27	0.39	0.56	0.85	0.32	0.29	0.45
	EFR-10	0.75	2.76	3.88	3.27	4.05	5.64	3.17	3.52	3.32	3.73	2.30	2.62	2.70	2.61	2.91	2.02	3.32
	EFR-11	0.79	4.73	4.26	4.00	3.73	2.82	2.41	3.56	2.60	3.91	2.37	3.86	3.22	2.44	2.90	2.89	2.58
	EFR-12	0.00	0.03	0.11	0.04	0.02	0.07	0.02	0.25	0.01	0.01	0.23	0.00	0.00	0.34	0.21	0.26	0.11
	EFR-13	0.49	0.22	0.25	0.09	0.15	1.14	0.27	0.78	0.26	0.39	0.47	0.38	0.46	0.88	0.44	0.84	0.44
	Total Free Product (ft)	2.20	7.83	8.68	7.92	8.78	10.27	5.99	8.71	6.29	8.19	5.82	7.25	7.12	7.28	7.00	6.31	6.94
	Total Free Product (gal)	1.43	5.09	5.64	5.15	5.71	6.68	3.89	5.66	4.09	5.32	3.78	4.71	4.63	4.73	4.55	4.10	4.51
Eastern Region of Free Product	EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-15	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
	Total Free Product (ft)	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Free Product (gal)	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
TOTAL APPARENT FREE PRODUCT VOLUME (GAL)		8.12	13.44	14.63	14.53	14.45	29.09	17.30	17.71	13.25	12.56	13.70	12.69	17.74	19.51	19.29	19.21	22.01

TABLE 2
L.E. CARPENTER - WHARTON, NEW JERSEY
REGIONAL APPARENT FREE PRODUCT TRENDS

THROUGH 1ST QUARTER 2003

EFR Event Date		26-Mar-02	10-Apr-02	6-May-02	13-Jun-02	15-Jul-02	9-Aug-02	13-Sep-02	8-Oct-02	7-Nov-02	17-Dec-02	11-Mar-03	17-Mar-03	24-Mar-03
		3 EFR events in March of 1Q03 due to snow and ice cover in Jan and Feb 03												
Western Region of Free Product	EFR-1	0.90	0.77	1.60	1.92	0.65	0.81	1.14	0.83	1.62	1.33	0.68	0.22	0.41
	EFR-2	1.40	1.20	2.39	2.15	1.33	1.02	0.09	1.27	2.86	3.07	1.96	0.94	1.02
	EFR-3	1.05	1.09	1.28	1.53	0.25	0.89	0.81	0.91	0.98	0.88	0.70	0.30	0.20
	EFR-17	1.90	0.77	0.75	0.60	0.43	0.67	1.50	0.71	1.10	1.07	0.18	0.03	0.00
	EFR-18	1.07	0.81	0.80	0.05	0.32	0.02	1.56	0.21	0.04	0.84	1.32	1.31	0.04
	EFR-20	1.24	1.24	1.74	2.03	1.62	1.58	1.85	1.47	1.77	2.45	2.30	1.88	1.33
	EFR-21	2.25	1.65	2.11	2.51	1.98	1.46	0.02	0.44	0.00	0.00	0.01	2.43	1.95
	EFR-28	0.21	0.63	0.29	0.35	1.08	0.38	1.22	0.22	0.14	0.28	1.04	0.30	0.61
	Total Free Product (ft)	10.02	8.16	10.96	11.14	7.66	6.83	8.19	6.06	8.51	9.92	8.19	7.41	5.56
	Total Free Product (gal)	6.51	5.30	7.12	7.24	4.98	4.44	5.32	3.94	5.53	6.45	5.32	4.82	3.61
West-Central Region of Free Product	EFR-4	0.37	0.89	0.98	1.07	1.00	0.26	0.11	0.43	2.86	0.52	0.00	0.00	0.00
	EFR-5	3.50	3.07	3.25	2.17	2.01	2.00	2.05	1.67	1.68	0.37	2.91	1.19	0.16
	EFR-6	2.30	0.77	0.43	0.27	0.54	0.45	0.62	0.38	3.14	1.63	0.27	0.29	0.27
	EFR-7	0.00	0.00	0.00	0.00	0.00	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-19	2.90	2.69	1.34	0.95	1.82	1.55	2.55	0.35	1.30	1.03	0.40	0.80	0.31
	EFR-22	0.80	0.39	0.16	0.19	0.32	0.11	0.22	1.39	1.09	0.76	2.60	0.54	0.00
	EFR-23	0.01	0.70	0.57	0.52	0.60	0.38	0.77	0.53	0.81	0.67	0.82	0.06	0.50
	EFR-24	0.60	1.35	0.33	0.24	1.18	0.19	0.13	0.16	0.01	0.00	0.00	0.00	0.00
	EFR-25	0.75	1.21	0.33	0.29	0.36	0.25	0.35	0.28	0.33	0.69	0.14	0.09	0.05
	EFR-26	1.55	1.67	1.83	1.92	2.42	1.69	1.24	0.59	0.28	0.40	0.33	0.27	0.30
	EFR-27	0.00	0.00	0.38	1.31	1.10	0.04	1.43	2.53	1.77	3.10	2.49	0.00	0.00
	Total Free Product (ft)	12.78	12.74	9.60	8.93	11.35	7.03	9.48	8.31	13.27	9.17	9.96	3.24	1.59
	Total Free Product (gal)	8.31	8.28	6.24	5.80	7.38	4.57	6.16	5.40	8.63	5.96	6.47	2.11	1.03
East-Central Region of Free Product	EFR-8	0.07	0.10	0.05	0.07	0.00	0.14	0.28	0.18	0.10	0.25	0.37	0.27	0.23
	EFR-9	0.32	0.32	0.28	0.11	0.35	0.30	0.19	0.32	0.33	0.25	0.24	0.02	0.32
	EFR-10	3.48	2.77	2.64	3.39	3.16	2.31	2.83	1.95	2.70	2.76	2.45	0.84	0.28
	EFR-11	2.12	0.99	0.87	1.01	1.54	2.08	3.91	2.06	1.88	1.87	2.62	4.69	3.83
	EFR-12	0.10	0.15	0.00	0.06	0.30	0.06	0.33	0.25	0.24	0.64	0.56	0.49	0.52
	EFR-13	0.87	0.68	1.71	1.11	0.55	0.26	0.61	0.30	0.55	0.68	0.08	0.11	0.26
	Total Free Product (ft)	6.96	5.01	5.55	5.75	5.90	5.15	8.15	5.06	5.80	6.45	6.32	6.42	5.44
Eastern Region of Free Product	Total Free Product (gal)	4.52	3.26	3.61	3.74	3.84	3.35	5.30	3.29	3.77	4.19	4.11	4.17	3.54
	EFR-14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-15	0.05	0.00	0.00	0.00	0.20	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
	EFR-16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00
TOTAL APPARENT FREE PRODUCT VOLUME (GAL)		19.38	16.84	16.97	16.78	16.32	12.36	16.84	12.63	18.11	16.60	15.91	11.10	8.18



2.3 Recovered Free Product Volume Estimations

After the completion of each EFR event, the total volume of extracted fluid was determined by gauging the 55-gallon vacuum head drum previously mentioned in Section 2.1 with an oil/water interface probe. The drum was allowed to stabilize for one hour prior to gauging to allow for separation of emulsified product resulting from aggressive recovery. Gauging was conducted on a level surface and recorded thickness was converted to volumes based on a conversion of 1.65 gallons per inch of fluid thickness in the 55-gallon drum. Recovered liquid free product volume was determined by subtracting the volume of water from the total fluid volume collected in the 55-gallon drum. Vapor phase product volume was estimated based on vacuum head airflow (in cfm) and vented contaminant concentrations (in ppm) obtained during extraction at each EFR well. The volume (combined liquid and vapor phase) of free product extracted during each month's EFR event is presented in Table 3.

The total extraction volume (measurable free product, product vapor, and groundwater) during first quarter 2003 was 91.07 gallons. Approximately 86.1 gallons of that amount were measurable free product as determined by vacuum head drum gauging and vapor phase volume calculations, and 4.96 gallons were groundwater. Since initiation in December 1997, site EFR activities have removed approximately 14,879 gallons of total fluids, of which, approximately 3,721 gallons were measurable free phase product. Based on historical modeling data (Ref. Section 2.2), approximately 4,279 to 9,279 gallons of recoverable free product remains in the ground. Tables 1, 2, and 3 contain a complete breakdown of EFR related information.

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #62

DATE

11-Mar-03

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT THICKNESS (ft)
EFR-1	9.37	10.05	0.68
EFR-2	9.97	11.93	1.96
EFR-3	9.95	10.65	0.70
EFR-4	10.79	10.79	0.00
EFR-5	9.79	12.7	2.91
EFR-6	9.13	9.4	0.27
EFR-7	5.1	5.1	0.00
EFR-8	5.44	5.81	0.37
EFR-9	5.69	5.93	0.24
EFR-10	6.4	8.85	2.45
EFR-11	5.95	8.57	2.62
EFR-12	4.99	5.55	0.56
EFR-13	4.67	4.75	0.08
EFR-14	4.35	4.35	0.00
EFR-15	3.68	3.68	0.00
EFR-16	4.51	4.51	0.00
EFR-17	9.27	9.45	0.18
EFR-18	8.72	10.04	1.32
EFR-19	11.65	12.05	0.40
EFR-20	9.52	11.82	2.30
EFR-21	10.44	10.45	0.01
EFR-22	11.32	13.92	2.60
EFR-23	7.74	8.56	0.82
EFR-24	11.24	11.24	0.00
EFR-25	10.56	10.7	0.14
EFR-26	12.6	12.93	0.33
EFR-27	8.31	10.8	2.49
EFR-28	9.81	10.85	1.04

CEMCO FIELD TECHNICIAN:

Gary Pizzuti

Total Volume Of
Free Standing
Product (gal) **15.91**

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Prepared By: Nicholas J. Clivett
RMT Project Manager

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY
MONTHLY EFR
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

EFR #62

DATE: 3/11/03

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM In Hg	CFM	lbs/hr	Total lbs
EFR-1	4.0	0.0667	656	10	17	100	3.03	0.2022
EFR-2	10.0	0.1667	1,574	24	17	100	7.28	1.2130
EFR-3	3.5	0.0583	394	6	17	100	1.82	0.1061
EFR-4	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-5	15.0	0.2500	918	14	17	100	4.25	1.0614
EFR-6	1.0	0.0167	525	8	17	100	2.43	0.0404
EFR-7	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-8	2.0	0.0333	131	2	17	100	0.61	0.0202
EFR-9	2.0	0.0333	2,099	32	17	100	9.70	0.3235
EFR-10	12.0	0.2000	1,968	30	17	100	9.10	1.8195
EFR-11	12.0	0.2000	1,968	30	17	100	9.10	1.8195
EFR-12	2.5	0.0417	394	6	17	100	1.82	0.0758
EFR-13	1.0	0.0167	131	2	17	100	0.61	0.0101
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	1.0	0.0167	262	4	17	100	1.21	0.0202
EFR-18	6.0	0.1000	1,312	20	17	100	6.06	0.6065
EFR-19	2.0	0.0333	918	14	17	100	4.25	0.1415
EFR-20	12.0	0.2000	1,706	26	17	100	7.88	1.5769
EFR-21	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-22	14.0	0.2333	394	6	17	100	1.82	0.4245
EFR-23	3.5	0.0583	394	6	17	100	1.82	0.1061
EFR-24	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-25	1.0	0.0167	656	10	17	100	3.03	0.0505
EFR-26	1.0	0.0167	1,968	30	17	100	9.10	0.1516
EFR-27	14.0	0.2333	787	12	17	100	3.64	0.8491
EFR-28	5.0	0.0833	394	6	17	100	1.82	0.1516
Total EFR Time (hrs)		2.0750	AVG ppm	834.91				
							TOTAL (LBS)	10.7704
							TOTAL VAPOR PHASE VOLUME (GAL)	1.3793

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)

(1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4; Analyte LELs: DEHP @ 0.3%; Ethylbenzene @ 1%; Xylenes @ 1.1%

Where:

ppm = Parts per Million by Volume
Flow = Cubic feet per minute (CFM) 100
Molar Mass (MM) = Molecular Weight (lb/lb-mole) = 292 (2)
IGC = Ideal Gas Constant (359 ft³/lb-mole) = 379
LEL = Free Product Mixture = 0.656 (1)
SG = Specific Gravity = 0.9363 (2)

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-B5 & WP-B4)
Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
(3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (\text{ppm}_v \times (60 \text{ min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359 \text{ ft}^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	22.50
Groundwater Thickness (in)	1.00
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	37.13
Total Groundwater Volume (gal)	1.65
Ratio Groundwater to Free Product (gal/gal)	0.04

	Y (gal)
Total Recovered Groundwater Volume (gal)	1.65
Total Recovered Free Product Volume (gal)	37.13
Total Recovered Fluids Volume (gal)	38.78

TOTAL EFR PRODUCT VOLUME 38.50 GAL

Date	11-Mar-03
Project #	3868.36
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #63

DATE

17-Mar-03

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT THICKNESS (ft)
EFR-1	9.21	9.43	0.22
EFR-2	9.81	10.75	0.94
EFR-3	9.75	10.05	0.30
EFR-4	10.55	10.55	0.00
EFR-5	9.66	10.85	1.19
EFR-6	8.96	9.25	0.29
EFR-7	4.52	4.52	0.00
EFR-8	5.28	5.55	0.27
EFR-9	5.48	5.5	0.02
EFR-10	6.31	7.15	0.84
EFR-11	5.81	10.5	4.69
EFR-12	4.81	5.3	0.49
EFR-13	4.49	4.6	0.11
EFR-14	4.21	4.21	0.00
EFR-15	3.27	3.27	0.00
EFR-16	4.25	4.25	0.00
EFR-17	7.75	7.78	0.03
EFR-18	8.49	9.8	1.31
EFR-19	11.4	12.2	0.80
EFR-20	9.27	11.15	1.88
EFR-21	8.12	10.55	2.43
EFR-22	10.97	11.51	0.54
EFR-23	7.42	7.48	0.06
EFR-24	10.77	10.77	0.00
EFR-25	10.46	10.55	0.09
EFR-26	12.41	12.68	0.27
EFR-27	10.7	10.7	0.00
EFR-28	9.57	9.87	0.30

CEMCO FIELD TECHNICIAN:

Gary Pizzuti

Total Volume Of
Free Standing
Product (gal) **11.10**

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Prepared By: Nicholas J. Clevett
RMT Project Manager

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

EFR #63

17-Mar-03

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM in Hg	CFM	lbs/hr	Total lbs
EFR-1	1.0	0.0167	1,706	26	17	100	7.88	0.1314
EFR-2	4.0	0.0667	5,117	78	17	100	23.65	1.5769
EFR-3	2.0	0.0333	4,067	52	17	100	18.80	0.6267
EFR-4	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-5	6.0	0.1000	1,706	26	17	100	7.88	0.7884
EFR-6	2.5	0.0417	1,050	16	17	100	4.85	0.2022
EFR-7	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-8	1.0	0.0167	262	4	17	100	1.21	0.0202
EFR-9	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-10	4.0	0.0667	3,280	50	17	100	15.16	1.0108
EFR-11	18.0	0.3000	1,837	28	17	100	8.49	2.5473
EFR-12	3.0	0.0500	525	8	17	100	2.43	0.1213
EFR-13	1.0	0.0167	262	4	17	100	1.21	0.0202
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-18	8.0	0.1333	2,624	40	17	100	12.13	1.6173
EFR-19	3.5	0.0583	2,230	34	17	100	10.31	0.6014
EFR-20	7.0	0.1167	413	6	17	100	1.91	0.2229
EFR-21	12.5	0.2083	728	11	17	100	3.37	0.7013
EFR-22	3.0	0.0500	1,312	20	17	100	6.06	0.3032
EFR-23	1.0	0.0167	525	8	17	100	2.43	0.0404
EFR-24	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-25	1.0	0.0167	1,837	28	17	100	8.49	0.1415
EFR-26	2.0	0.0333	4,986	76	17	100	23.05	0.7682
EFR-27	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-28	2.0	0.0333	2,362	36	17	100	10.92	0.3639
Total EFR Time (hrs)		1.3750	AVG ppm	1650.14				
							TOTAL (LBS)	11.8067
							TOTAL VAPOR PHASE VOLUME (GAL)	1.5119

Where:

ppm = Parts per Million by Volume
 Flow = Cubic feet per minute (CFM) 100
 Molar Mass (MM) = Molecular Weight (lb/lb-mole) = 292 (a)
 LEL = Ideal Gas Constant (359 ft³/lb-mole) = 379
 SG = Free Product Mixture = 0.656 (a)
 Specific Gravity = 0.9363 (a)

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)
 (1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1985 @ MW-1R; MW-11S; MW-8R; WP-B5 & WP-B4;
 Analyte LELs: DEHP @ 0.3%; Ethylbenzene @ 1%; Xylenes @ 1.1%

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1985 @ MW-1R; MW-11S; MW-8R; WP-B5 & WP-B4)
 Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2
 (3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1989 @ MW-1R; EFR-11 & WP-A6)

$$\text{Pounds/Hr (lbs/hr)} = (\text{ppm}_v \times (60 \text{ min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359 \text{ ft}^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	17.50
Groundwater Thickness (in)	1.50
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	28.88
Total Groundwater Volume (gal)	2.48
Ratio Groundwater to Free Product (gal/gal)	0.09

	Y (gal)
Total Recovered Groundwater Volume (gal)	2.48
Total Recovered Free Product Volume (gal)	28.88
Total Recovered Fluids Volume (gal)	31.35

TOTAL EFR PRODUCT VOLUME 30.39 GAL

Date	17-Mar-03
Project #	3883.36
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR WELL GAUGING LOG

EFR #64

DATE

24-Mar-03

WELL ID	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT THICKNESS (ft)
EFR-1	8.27	8.68	0.41
EFR-2	8.85	9.87	1.02
EFR-3	8.74	8.94	0.20
EFR-4	9.66	9.66	0.00
EFR-5	8.75	8.91	0.16
EFR-6	8.08	8.35	0.27
EFR-7	4.6	4.6	0.00
EFR-8	4.47	4.7	0.23
EFR-9	4.71	5.03	0.32
EFR-10	5.53	5.81	0.28
EFR-11	5.01	8.84	3.83
EFR-12	4.03	4.55	0.52
EFR-13	3.71	3.97	0.26
EFR-14	4.57	4.57	0.00
EFR-15	2.9	2.9	0.00
EFR-16	4.08	4.08	0.00
EFR-17	6.67	6.67	0.00
EFR-18	7.5	7.54	0.04
EFR-19	10.24	10.55	0.31
EFR-20	8.29	9.62	1.33
EFR-21	7.15	9.1	1.95
EFR-22	10.03	10.03	0.00
EFR-23	6.8	7.3	0.50
EFR-24	9.94	9.94	0.00
EFR-25	9.54	9.59	0.05
EFR-26	11.52	11.82	0.30
EFR-27	9.38	9.38	0.00
EFR-28	8.54	9.15	0.61

CEMCO FIELD TECHNICIAN:

Gary Pizzuti

**Total Volume Of
Free Standing
Product (gal) 8.18**

TABLE 3
L. E. CARPENTER - WHARTON, NEW JERSEY

MONTHLY EFR
VAPOR AND LIQUID PHASE VOLUMETRIC CALCULATION LOG

EFR #64

24-Mar-03

WELL ID	EXTRACTION TIME		VAPOR PHASE CONCENTRATION		SYSTEM RECOVERY DATA			
	TOTAL TIME (min)	TOTAL TIME (hrs)	PPM	LEL (%)	VACUUM in Hg	CFM	lbs/hr	Total lbs
EFR-1	2.0	0.0333	1,050	16	17	100	4.85	0.1617
EFR-2	6.0	0.1000	1,837	28	17	100	8.49	0.8491
EFR-3	1.5	0.0250	1,968	30	17	100	9.10	0.2274
EFR-4	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-5	1.0	0.0167	787	12	17	100	3.64	0.0606
EFR-6	1.0	0.0167	787	12	17	100	3.64	0.0606
EFR-7	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-8	1.5	0.0250	262	4	17	100	1.21	0.0303
EFR-9	1.5	0.0250	394	6	17	100	1.82	0.0455
EFR-10	2.0	0.0333	394	6	17	100	1.82	0.0606
EFR-11	17.0	0.2833	787	12	17	100	3.64	1.0310
EFR-12	2.0	0.0333	262	4	17	100	1.21	0.0404
EFR-13	1.0	0.0167	131	2	17	100	0.61	0.0101
EFR-14	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-15	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-16	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-17	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-18	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-19	2.0	0.0333	1,706	26	17	100	7.88	0.2628
EFR-20	7.0	0.1167	1,050	16	17	100	4.85	0.5661
EFR-21	10.0	0.1667	1,312	20	17	100	6.06	1.0108
EFR-22	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-23	2.0	0.0333	656	10	17	100	3.03	0.1011
EFR-24	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-25	1.0	0.0167	1,443	22	17	100	6.67	0.1112
EFR-26	3.0	0.0500	2,362	36	17	100	10.92	0.5458
EFR-27	0.0	0.0000	0	0	17	100	0.00	0.0000
EFR-28	3.0	0.0500	1,574	24	17	100	7.28	0.3639
Total EFR Time (hrs)		1.0750	AVG ppm	840.87				
							TOTAL (LBS)	5.5393
							TOTAL VAPOR PHASE VOLUME (GAL)	0.7094

NOTE PPM = (% LEL on Meter) x (LEL of Product Mixture) x (1,000,000)

- (1) Weighted LEL for analyte mixture @ 0.656% (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-8S & WP-84; Analyte LELs: DEHP @ 0.3%; Ethylbenzene @ 1%; Xylenes @ 1.1%)

Where:

ppm = Parts per Million by Volume
Flow = Cubic feet per minute (CFM) 100
Molar Mass (MM) = Molecular Weight (lb/lb-mole) = 292 (2)
IGC = Ideal Gas Constant (359 ft³/lb-mole) = 379
LEL = Free Product Mixture = 0.656 (1)
SG = Specific Gravity = 0.9363 (2)

NOTE (2) Avg. Molar Mass @ 292 (based on DEHP, Ethylbenzene & Total Xylene concentrations in Roy F. Weston product sampling conducted on Feb 27, 1995 @ MW-1R; MW-11S; MW-6R; WP-8S & WP-84)

Individual Analyte Molar Mass: DEHP @ 390.54; Ethylbenzene @ 106.2; Total Xylenes @ 106.2

- (3) Average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1R; EFR-11 & WP-A8)

$$\text{Pounds/Hr (lbs/hr)} = (\text{ppm}_v \times (60 \text{ min/hr}) \times (\text{CFM}) \times (\text{MM})) / ((1 \times 10^6) \times (359 \text{ ft}^3/\text{lb-mole}))$$

Free Product & Groundwater Gauging (55-Gal Drum)	
Product Thickness (in)	10.00
Groundwater Thickness (in)	0.50
Conversion @ 1.65 gal/inch	1.65
Total Product Volume (gal)	16.50
Total Groundwater Volume (gal)	0.83
Ratio Groundwater to Free Product (gal/gal)	0.05

	Y (gal)
Total Recovered Groundwater Volume (gal)	0.83
Total Recovered Free Product Volume (gal)	16.50
Total Recovered Fluids Volume (gal)	17.33

TOTAL EFR PRODUCT VOLUME 17.21 GAL

Date	24-Mar-03
Project #	3868.36
Subcontractor	CEMCO
Vac Head Utilized	NORTECH Corp. 551B

CEMCO Field Technician Gary Pizzuti

RMT Project Manager Nick Clevett

Section 3

Quarterly Groundwater Monitoring

RMT conducted groundwater monitoring activities in the first quarter of 2003 on March 18th, 19th and 20th. In the past, we performed groundwater monitoring in accordance with the procedures contained in the NJDEP's *Field Sampling Procedures Manual* dated May 1992. However, in second quarter 2002 we initialed groundwater monitoring using the low-flow methodology outlined in our May 2001 Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater (MNA workplan). The MNA workplan was approved by NJDEP on January 24, 2002. Although the sampling was performed using low-flow methods, the remaining parts of the MNA workplan have not yet been initiated. A QED bladder pump system with disposable bladders (as described in the approved MNA workplan Quality Assurance Project Plan (QAPP)) was used as dedicated monitoring equipment to collect groundwater samples at LEC. Locations of the quarterly monitoring wells are shown on Figure 2.

Monitoring wells MW-4, MW-11D(R), MW-14S, MW-14I, MW-15S, MW-15I, MW-17S, MW-21, MW-22(R), and MW-25(R) were sampled utilizing the low-flow methodology outlined in the QAPP, presented in Appendix A of the approved MNA workplan. Specifically, RMT used a QED bladder pump to remove groundwater at a low rate (average of 0.3 L/minute). Before sampling the wells we measured field parameters until they stabilized to obtain a representative sample of the formation water for laboratory testing. Monitoring well sample data for the first quarter of 2003 is presented in Appendix C. Once the field parameters in each well stabilized or following adequate purging if stabilization could not be achieved, samples were collected from the Teflon-lined polyethylene tubing of the bladder pump. RMT submitted the samples to the Lancaster Laboratories, Inc. (Lancaster), located in Lancaster, Pennsylvania for benzene, toluene, ethylbenzene, xylenes (BTEX) and bis (2-ethylhexyl) phthalate (DEHP) analysis per the current groundwater monitoring protocol outlined in Table 4.

A sample duplicate, a field blank, a trip blank and a rinsate blank were collected to satisfy Quality Assurance/Quality Control (QA/QC) requirements. A summary of the quarterly groundwater monitoring QA/QC requirements for the LEC site is also outlined in Table 4. The trip blank was prepared by the laboratory and remained with the sample containers until the samples were returned to the laboratory. The duplicate was collected from monitoring well MW-14S (duplicate sample No. Dupe-01) and analyzed for BTEX and DEHP. The rinsate blank was collected by circulating triple distilled water through the cleaned bladder pump assembly to verify that the decontamination procedures were adequate. Any sampling equipment used

at each well was decontaminated prior to each use utilizing an environmental detergent (Alconox) and clean water wash followed by a distilled water rinse. The field (atmosphere) blank was collected during the sampling event by opening a bottle of unpreserved de-ionizer water provided by the laboratory, leaving the bottle open during the sampling of one well, and pouring that water directly into clean sample bottles with added preservative also provided by the laboratory.

TABLE 4
L.E. CARPENTER - WHARTON, NEW JERSEY
QUARTERLY MONITORING PROTOCOL

THROUGH 1ST QUARTER 2003

Monitoring Well	Analytical Parameters	Rational	Comments
MW-14S	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results will identify the migration of the dissolved groundwater plume in the Shallow Aquifer Zone downgradient of the site (Wharton Enterprise property)	Monitoring Well added to quarterly sampling protocol beginning 1st Quarter 2002 the further assess groundwater quality and flow within the Wharton Enterprise property.
MW-14I	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results will identify the migration of the dissolved groundwater plume in the Intermediate Aquifer Zone downgradient of the site (Wharton Enterprise property)	Original Monitoring Well
MW-15S	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results will identify if the dissolved groundwater plume is migrating through this portion of the shallow aquifer zone (on the rail spur right-of-way)	Original Monitoring Well
MW-15I	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results will identify the migration of the dissolved groundwater plume through the Intermediate Aquifer Zone in the is area (on rail spur right-of-way)	Original Monitoring Well
MW-22R	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site (Wharton Enterprise property).	Original Monitoring Well. Beginning in 2nd quarter 2001, well will be analyzed for DEHP quarterly vs. semiannually
MW-25R	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results will identify the movement of the dissolved groundwater plume in the shallow aquifer zone downgradient of the site. East of MW-22R (Wharton	DEHP sampling required quarterly as opposed to semi annually per Nov 23, 1998 NJDEP Letter.
MW-17S	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer	Original Monitoring Well
MW-4	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone (south portion of subject site, bordering on the	Original Monitoring Well
MW-11D(R)	DEHP ⁽¹⁾	Analytical results from this well identify potential contamination of deep aquifer. This well lies in the center of the free product plume.	New well added to monitoring protocol as of May 21, 1999 NJDEP Letter (review of 1st quarter 1999 monitoring report). Well exhibited DEHP contamination potentially as the result of draw down during well installation. Well will be sampled for both monito
MW-21	BTEX ⁽¹⁾ DEHP ⁽¹⁾	Analytical results from this well will also identify "background" conditions at the site in the shallow aquifer zone. Additionally, data from this well is used to track the potential migratory trend from MW-25 (Eastern most	New well added to monitoring protocol as of Nov 23, 1998 NJDEP Letter.

NOTES

- (1) Parameter analyzed every quarter
(2) Low flow sampling initiated 1st Quarter 2002 [Ref. Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater (RMT, May 2001)]
(3) Beginning 1st Quarter 2002, both BTEX and DEHP will be analyzed every quarter

S: Shallow Hydrogeologic Unit
I: Intermediate Hydrogeologic
D: Deep Hydrogeologic Unit
R: Replacement well

QA/QC PROTOCOL

QA/QC procedures outlined in the Quality Assurance Project Plan (QAPP) included as Appendix A in the report entitled Workplan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater (RMT, May 2001), and amended in the October 23, 2001 responses to agency comments regarding the "Workplan", will be followed during each sampling event.

Field Blank: BTEX & DEHP - USE TRIPLE DISTILLED WATER
Trip Blank: BTEX & DEHP - USE TRIPLE DISTILLED WATER
Rinsate Blank: BTEX & DEHP

FIELD ANALYSIS

All quarterly monitoring wells will be field tested for pH, temperature, specific conductivity, & turbidity

A comparison of the results of the chemical analyses to New Jersey Class IIa Groundwater Quality Standards (NJGWQS) is outlined in Table 5. The presence of BTEX and/or DEHP was not detected at concentrations above NJGWQS in samples collected from MW-11D(R), MW-14S, MW-14I, MW-15S, MW-15I, MW-17S, MW-21, and MW-25(R). At MW-4, DEHP was detected at a concentration of 46 µg/L, and at MW-22(R), total xylenes and DEHP were detected at concentrations of 2,000 µg/L and 54 µg/L respectively. The concentrations detected at each of these two monitoring wells exceed the NJGWQS for DEHP and total xylenes of 30 µg/L and 40 µg/L respectively.

Even though contaminant concentrations (specifically total xylenes and DEHP) at MW-22(R) have consistently exceeded NJGWQS, contaminant concentrations at downgradient monitoring location MW-14S have been non-detect. In addition, contaminant concentrations at monitoring location MW-25(R) (also located downgradient from MW-22R at certain times of the year) have not exceeded NJGWQS since second quarter 1997, and contaminant concentration further downgradient at MW-21 have never exceeded NJGWQS since sampling began at this location in first quarter 1999.

3.1 Responses to NJDEP Quarterly Report Review

Agency comments regarding their review of the 4th Quarter 2002 Monitoring Report (RMT, January 28, 2003) were outlined in the NJDEP letter dated March 26, 2003. Their comments were related to issues associated with MW-11D(R), MW-22(R), and the drainage channel surface water sampling. The following discussions comprise our responses to their comments.

3.1.1 MW-11D(R)

The NJDEP commented on DEHP concentrations historically found in deep well MW-11D(R), and indicated their concern that DEHP concentrations were steadily increasing over three quarters of sampling in 2002. RMT summarized the historical groundwater monitoring data, including the results from the first quarter 2003 sampling event on Table 5, and included the corresponding analytical laboratory reports in Appendix E.

It is important to note that there is no discernable trend of DEHP concentrations in MW-11D(R) when the data are viewed in total from 1999 through 2003 (Table 5; Appendix D). In addition, as we have described in previous reports, DEHP has been problematic in terms of laboratory analytical results because it is ubiquitous in the environment, and it is also a common laboratory contaminant. Because DEHP has often been found in laboratory blanks, because of past difficulties with field decontamination of sampling equipment, and because of the very strong upward vertical hydraulic gradient (Table 6), LEC has always maintained that sporadic

past DEHP detections in MW-11D(R) have been false positives. LEC has performed a variety of tasks in order to eliminate or minimize production of false positive data. The first steps we took was to institute more rigid field decontamination procedures in order to minimize potential field cross-contamination, as well as changing to in-field use of triple-distilled decontamination water. This was followed by initiation of low-flow sampling methodology (March 2002) in order to minimize collection of particulate matter with the groundwater samples.

Despite these actions, laboratory cross-contamination of DEHP still proved to be a concern in monitoring events through fourth quarter of 2002. Although DEHP in MW-11D(R) was found to be present below 1 µg/L during the fourth quarter 2002 sampling event, it was again present in the laboratory blank. As a result RMT evaluated several laboratories in terms of their in-house program to minimize DEHP as a common lab contaminant. As was mentioned in the fourth quarter 2002 monitoring report, beginning with first quarter 2003 Lancaster Laboratories, Inc., a New Jersey certified laboratory, performed all laboratory analyses. As shown in the first quarter 2003 analytical results provided by Lancaster, DEHP was not detected above the method detection limit (MDL) of 1.0 µg/L in either MW-11D(R) nor in the laboratory blanks. In addition, DEHP was not detected in any of the Quality Assurance/Quality Control (QA/QC) samples taken during this event.

LEC will continue to sample groundwater from MW-11D(R) and test it for the presence of DEHP.

3.1.2 MW-22(R)

The NJDEP requested that LEC explain the disappearance of DEHP in MW-22(R). Concentration trend diagrams are included in Appendix D of this report to aid in our response to this request.

Historical fluctuation of DEHP concentrations at MW-22(R) could be the result of numerous variables including cross contamination during variations in groundwater flow directions, well installation activities, turbidity in the groundwater temperature variations, laboratory contamination issues, and groundwater elevation fluctuations. For example, data gathered by Weston Services, Inc. (WSI; Supplemental Remedial Investigation; November 1990) during the remedial investigation (RI) phase of this project shows that MW-22(R) is located in an apparently isolated former sludge impoundment area (AEC-B and AEC-E; see WSI Figure 3-1). Although no free product phase has been measured in MW-22(R), the former sludge impoundment area is a potential source of groundwater contamination. That the sludge formerly deposited in this area could be a likely source for the DEHP in MW-22(R) can also be supported by examining the trend diagrams shown in Appendix D. Note that most of the MW-

22(R) concentrations before initiation of low-flow sampling (before 2002) are higher than after start-up of low-flow sampling, and that the current concentration trend is relatively stable at relatively low levels. This suggests that the DEHP that was detected was adsorbed to fine-grained particulates from the well (high turbidity). The level of DEHP has decreased below the NJGWQS and PQL of 30 µg/L in MW-22(R) during 2002, although it was detected at 54 µg/L during the 2003 1st quarter sampling event. It is important to note that the overall concentrations in this well have dropped over two orders of magnitude since the initiation of low flow sampling methods (see trend diagram in Appendix D).

It is more significant that wells MW-25(R) and MW-14s, both downgradient of MW-22(R), are essentially non-detect for dissolved phase DEHP and xylene. This information supports the idea that dissolved phase contamination detected at MW-22(R) is the result of an isolated source area adjacent to the monitoring location (*i.e.*, AEC-B). More importantly, these data show that the "halo" of dissolved phase volatile organics around free product and/or potential residual sludge sources is limited, and does not appreciably extend downgradient (for example between MW-22(R) and MW-14S). Rapid degradation of these constituents was further substantiated by data included in RMT's May 2000 Evaluation of Remediation of Groundwater by Natural Attenuation. For example, high levels of heterotrophic plate count detected in free-product fringe areas (*i.e.*, WP-C4, WP-B10, MW-2(R) and MW-6(R)) support the thesis that degradation processes are sufficient to keep dissolved phase VOC constituents from migrating beyond these locations. This in turn is shown empirically by data collected from the drainage ditch, MW-14S, and MW-25(R). LEC has previously committed to providing additional evidence regarding naturally occurring degradation of dissolved phases of groundwater contaminants following completion of the source remediation by implementing the "Work Plan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater" (RMT, May 2001), which was approved by NJDEP on January 24, 2002. As described in that document, additional monitoring wells and dedicated sampling/testing equipment in both existing and proposed monitoring wells to further evaluate the hydrogeologic properties of this area (Wharton Enterprise Property) will be performed. Meanwhile RMT will continue to monitor groundwater quality on a quarterly basis and evaluate the data with respect to fate and transport of dissolved constituents. Based on data collected to date, it is likely that these monitoring events will provide additional empirical data showing that dissolved constituents in groundwater are stable and are not migrating beyond the narrow "halo" zone described above.

The proposed area of excavation to remediate the DEHP/xylene source material will include the residual waste materials contained within the AEC-B and AEC-E areas (MW-22R will have to be abandoned and replaced following emplacement of clean backfill). In addition, polychlorinated biphenyl (PCB) impacted soils known to exist surficially (0-2 ft bgs) are also proposed for excavation and management as outlined in Section 6.2.10 of the report entitled

"Findings and Recommendation Regarding a Conceptual Free-Product Remediation Strategy" (RMT, March 2002). Regardless of whether or not the two source areas (AEC-B and the main area of free product) are connected, the source material will be removed and disposed of off site. The details of this remediation, including monitoring well installation, construction, and location, and details regarding excavation, erosion control and waste management, will be outlined in the upcoming Remedial Action Work Plan (RAWP) that LEC will prepare and submit as soon as NJDEP and EPA have approved the lead "Focused Feasibility Study (FFS) for the Lead-Impacted Soil Remediation" (RMT, February 2003) and have modified the ROD with respect to the lead-impacted soils.

3.1.3 Drainage Channel Surface Water Sampling

NJDEP has again requested that LEC implement use of passive diffusion bag (PDB) samplers to collect surface water samples within the drainage ditch that acts as a local discharge area for shallow groundwater. PDB samplers are made of low-density polyethylene and utilize the principal of molecular diffusion to allow various contaminants to diffuse through the polyethylene bag-wall into the bag from a saturated zone proximal to a well screen.

PDB samplers should not be used to collect samples for DEHP analysis for two main reasons:

- 1) PDB samplers are known to leach DEHP from the polyethylene materials used in their construction
- 2) PDB samplers are not suited for sampling SVOCs, such as DEHP, due to the slow diffusion rates of SVOC compounds through polyethylene.

While these devices can be useful for monitoring VOCs, they are not appropriate for SVOCs (especially DEHP) for the above stated reasons.

NJDEP stated in their March 26 letter that the concern for the PDB samplers contributing DEHP to the sample could be resolved by conducting proper QA/QC water analysis. However, it should be noted that there is no reasonable way to estimate how DEHP concentrations leaching from the polyethylene bags may vary between individual PDB samplers, which would make interpretation of such QA/QC data problematic. Due the high potential for error associated with the use of these devices with respect to DEHP, LEC again restates our reluctance to use these devices at this site.

Documentation supporting our position on this matter is provided in the following description taken from the United States Geological Survey "Users Guide for Polyethylene-Based Passive

Diffusion Bag Samplers to Obtain Volatile Organic Compound Concentrations in Wells" (USGS Water-Resources Investigations report 01-4061; 2001) :

"Unpublished laboratory test data of semi volatile compounds in contact with PDB samplers showed a higher concentration of phthalates inside the PDB sampler than outside the PDB sampler, suggesting that the Polyethylene may contribute phthalates to the enclosed water. Thus, the samplers should not be used to sample for phthalates."

The fact that PDB samplers should not be used to sample waters to be tested for semi-volatile organics was also reiterated at a recent training session on PDB samplers sponsored by the NJDEP and the Interstate Technology Regulatory Council (ITRC). This training session was held at the NJDEP Public Hearing Room at 401 East State Street, Trenton, NJ on January 29, 2003. In addition to the contribution of phthalates leached from the polyethylene bag-wall to in-bag water, the ability of compounds to diffuse through the polyethylene is influenced by a variety of factors, including molecular size and shape, and the hydrophobic nature of specific compounds. These factors to varying degrees are why unpublished laboratory tests show that resulting concentrations for semi-volatiles within PDB samplers are lower than ambient (aquifer) conditions.

When LEC instituted sampling of these surface waters on a regular basis, RMT developed a standard operating procedure for collection of surface water using a peristaltic pump at a low rate of flow. This method was used in order to collect water from below the water surface (near the bottom of the ditch) and thus obtain the most representative sample of influent water closest to the groundwater/surface-water interface. However, NJDEP requested that we change from that procedure and simply collect grab samples of the water. It is interesting to note that results from both peristaltic and grab methods have been comparable. Lack of DEHP and other organic constituents in surface water of the drainage ditch is not surprising considering that data from other wells on-site show that these constituents are not migrating beyond no more than about 50 feet downgradient from impacted wells. LEC will comply with the NJDEP request to sample surface water for DEHP and BTEX using grab sampling techniques during subsequent events.

Again, as described in the document "Work Plan for Supplemental Investigation of Natural Attenuation of Dissolved Constituents in Groundwater" (RMT, May 2001), which was approved by NJDEP on January 24, 2002, additional monitoring well sampling and installation of dedicated sampling/testing equipment in both existing and proposed monitoring wells will be performed following completion of the proposed remedial action that has been conceptually approved by NJDEP. Resulting data will be used to further evaluate the hydrogeologic properties (including interaction of groundwater and surface water) in the area between the main mass of recoverable free-product (proposed excavation) and the drainage ditch. This will

also be detailed in the Remedial Action Work Plan, which is expected to be completed immediately following agency approval of the lead FFS. Meanwhile RMT will continue to monitor surface water quality on a quarterly basis and evaluate the data with respect to fate and transport of dissolved constituents.

TABLE 5
L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

THROUGH 1ST QUARTER 2003

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(a)				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-4	1995	1	22-Feb-95	< 0.3	26	< 0.3	32	25,000
		2	13-Jun-95	< 0.5	16	< 0.7	13	48,000
		3	13-Sep-95	< 1	9.7	< 1.4	8.7	NA
		4	7-Dec-95	< 0.1	8.8	< 0.14	11	17,000
	1996	1	7-Mar-96	< 0.5	24	< 0.7	47	NA
		2	14-Jun-96	< 0.1	7	< 0.14	7.8	9,300
		3	17-Sep-96	< 0.1	6.8	< 0.14	4.3	NA
		4	12-Dec-96	< 0.1	2.3	< 0.14	< 0.5	11,000
	1997	1	7-Apr-97	< 0.2	3.5	< 0.14	1.8	NA
		2	14-Aug-97	< 0.2	1.2	< 0.14	4.2	120
		3	3-Oct-97	< 0.2	2.2	< 0.14	12.6	NA
		4		NS	NS	NS	NS	NS
	1998	1	12-Mar-98	< 0.4	< 0.28	< 0.28	< 1	NA
		2	4-Jun-98	< 0.2	1.0	< 0.14	1.4	710
		3	28-Aug-98	< 0.2	1.9	< 0.14	1.2	NA
		4	20-Nov-98	< 0.2	9.3	< 0.14	3.3	650
	1999	1	21-Jan-99	< 0.2	1.1	< 0.14	2.5	NA
		2	15-Apr-99	< 0.31	0.66	< 0.34	< 0.4	3,000
		2 duplicate	15-Apr-99	< 0.31	0.43	< 0.34	< 0.4	4,400
		3	22-Jul-99	< 0.31	3.10	< 0.34	2.9	NA
		4	25-Oct-99	< 0.31	0.51	< 0.34	< 0.4	4,000
	2000	1	17-Jan-00	< 0.31	0.54	< 0.34	1.6	NA
		2	13-Apr-00	< 0.25	0.31	< 0.27	< 0.25	480
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	NA
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	0.41	210
		4 duplicate	30-Oct-00	< 0.25	< 0.27	< 0.27	0.33	NA
	2001	1	27-Feb-01	< 0.25	1	< 0.27	3.7	NA
DEHP found in lab blank		2	2-Apr-01	< 0.28	0.31	< 0.26	0.41	300
		3	24-Jul-01	< 0.28	0.52	< 0.26	2.5	NA
		4	26-Oct-01	< 0.28	0.33	< 0.26	0.77	3300
	2002	1	7-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	150
		2	21-May-02	< 0.22	< 0.18	< 0.24	< 0.2	1300
		2 duplicate	22-May-02	< 0.22	< 0.18	< 0.24	< 0.2	950
Dilution factor 5.0 for bis(2-ethylhexyl)phthalate		3	13-Aug-02	< 0.22	0.54	< 0.24	0.86	670
		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 8.6
	2003	1	20-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	46

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ⁽⁴⁾				
	YEAR	QUARTER	SAMPLING DATE	Benzene ug/l	Ethylbenzene ug/l	Toluene ug/l	Total Xylenes ug/l	DEHP ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-11(DR) ⁽²⁾⁽³⁾	1999	1	21-Jan-99	< 0.2	< 0.1	< 0.14	< 0.5	64
		1 duplicate	21-Jan-99	< 0.2	< 0.1	< 0.14	< 0.5	20
		2		NS	NS	NS	NS	NS
		3 ⁽³⁾	22-Jul-99	NA	NA	NA	NA	59
		3 duplicate	22-Jul-99	NA	NA	NA	NA	13
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.1
	2000	1	17-Jan-00	NA	NA	NA	NA	< 4.2
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
	Field ID: MW-11DD	2 duplicate	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	NA
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	3.4
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	2
DEHP found in lab blank	2001	1	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	0.8
DEHP found in lab blank	Field ID: MW-11DD	1 duplicate	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	0.9
DEHP found in lab blank		2	2-Apr-01	NA	NA	NA	NA	1.5
		3	24-Jul-01	NA	NA	NA	NA	< 0.4
		4	26-Oct-01	NA	NA	NA	NA	0.6
	2002	1	7-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	2.8
		2	21-May-02	< 0.22	< 0.18	< 0.24	< 0.2	26
		3	13-Aug-02	NA	NA	NA	NA	63
		4	20-Nov-02	NA	NA	NA	NA	B 0.2
	2003	1	20-Mar-03	NA	NA	NA	NA	< 1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(A)				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-14S	2002	1	6-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	1.2
DEHP found in lab blank		2	21-May-02	< 0.22	< 0.18	< 0.24	< 0.2	0.7
		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.3
		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.5
	2003	1	19-Mar-03	< 0.2	J 0.21	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(b)				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-14I	1995	1	22-Feb-95	< 0.3	0.4	< 0.3	1.2	140
		2	13-Jun-95	< 0.1	< 0.14	< 0.14	< 0.5	1.6
		3	13-Sep-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	7-Dec-95	< 0.1	< 0.14	< 0.14	< 0.5	2.6
	1996	1	7-Mar-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		2	14-Jun-96	< 0.1	< 0.14	< 0.14	< 0.5	< 1.3
		3	17-Sep-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	12-Dec-96	< 0.1	< 0.14	< 0.14	< 0.5	2.7
	1997	1	7-Apr-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	14-Aug-97	< 0.2	< 0.14	< 0.14	< 0.5	1.6
		3	3-Oct-97	1.2	22.1	< 0.7	176	NA
		4		NS	NS	NS	NS	NS
	1998	1	12-Mar-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	4-Jun-98	< 0.2	0.34	< 0.14	2	24
		3	28-Aug-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4	20-Nov-98	< 0.2	< 0.14	< 0.14	< 0.5	< 1.2
	1999	1	21-Jan-99	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.1
		3	22-Jul-99	< 0.31	< 0.38	< 0.34	< 0.4	NA
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.1
	2000	1	17-Jan-00	< 0.31	< 0.38	< 0.34	< 0.4	NA
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	NA
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
	2001	1	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	2.4
DEHP found in lab blank		2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	3.5
Field ID: MW-14Id		2 duplicate	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	NA
		3	24-Jul-01	< 0.28	< 0.26	< 0.26	< 0.25	NA
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	2.2
	2002	1	6-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	3.4
DEHP found in lab blank		2	21-May-02	< 0.22	< 0.18	< 0.24	< 0.2	1.0
		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.2
		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.3
	2003	1	19-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(B)				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-15S	1995	1	22-Feb-95	< 0.3	< 0.3	< 0.3	< 1	2.4
		2	13-Jun-95	< 0.1	< 0.14	< 0.14	< 0.5	< 1.1
		3	13-Sep-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	7-Dec-95	< 0.1	< 0.14	< 0.14	< 0.5	< 1.2
	1996	1	7-Mar-96	< 0.2	33	< 0.28	83	NA
		2	14-Jun-96	< 0.1	< 0.14	< 0.14	< 0.5	< 1.2
		3	17-Sep-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	12-Dec-96	< 0.1	0.21	< 0.14	1.7	< 1.2
	1997	1	7-Apr-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	14-Aug-97	< 0.2	< 0.14	< 0.14	< 0.5	1.2
		3	3-Oct-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4		NS	NS	NS	NS	NS
	1998	1	12-Mar-98	< 0.2	< 0.14	1.4	< 0.5	NA
		2	4-Jun-98	< 0.2	< 0.14	< 0.14	1.3	< 1.1
		3	28-Aug-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4	1-Dec-98	< 0.2	< 0.14	< 0.14	< 0.5	< 1.2
	1999	1	21-Jan-99	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.2
		3	22-Jul-99	< 0.31	< 0.38	< 0.34	< 0.4	NA
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.1
	2000	1	17-Jan-00	< 0.31	< 0.38	< 0.34	< 0.4	NA
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	NA
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
	2001	1	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	NA
DEHP found in lab blank		2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	0.8
		3	24-Jul-01	< 0.28	< 0.26	< 0.26	< 0.25	NA
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	< 0.4
	2002	1	7-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	1.0
DEHP found in lab blank		2	20-May-02	< 0.22	< 0.18	< 0.24	< 0.2	0.7
		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.2
		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.2
	2003	1	19-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(a)				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (POL)		1	5	5	2	30
MW-151	1995	1	22-Feb-95	< 0.3	< 0.3	< 0.3	< 1	250
		2	13-Jun-95	< 0.1	< 0.14	< 0.14	< 0.5	7.2
		3	13-Sep-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	7-Dec-95	< 0.1	< 0.14	< 0.14	< 0.5	2.8
	1996	1	7-Mar-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		2	14-Jun-96	< 0.1	< 0.14	< 0.14	< 0.5	1.2
		3	17-Sep-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	12-Dec-96	< 0.1	< 0.14	< 0.14	< 0.5	1.7
		4 duplicate	12-Dec-96	< 0.1	< 0.14	< 0.14	< 0.5	1.9
	1997	1	7-Apr-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	14-Aug-97	< 0.2	< 0.14	< 0.14	< 0.5	2.2
		3	3-Oct-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4		NS	NS	NS	NS	NS
	1998	1	12-Mar-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	4-Jun-98	< 0.2	< 0.14	< 0.14	< 0.5	1.9
		2 duplicate	4-Jun-98	< 0.2	< 0.14	< 0.14	< 0.5	3.8
		3	28-Aug-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4	20-Nov-98	< 0.2	< 0.14	< 0.14	0.53	11
		4 duplicate	20-Nov-98	< 0.2	0.2	< 0.14	0.8	9.8
	1999	1	21-Jan-99	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	< 0.4	4.8
		3	22-Jul-99	< 0.31	< 0.38	< 0.34	< 0.4	NA
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	4.1
	2000	1	17-Jan-00	< 0.31	< 0.38	< 0.34	< 0.4	NA
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	2
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	NA
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	2
	2001	1	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	NA
DEHP found in lab blank		2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	1.2
		3	24-Jul-01	< 0.28	< 0.26	< 0.26	< 0.25	NA
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	0.5
	2002	1	7-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	1.0
		2	21-May-02	< 0.22	< 0.18	< 0.24	< 0.2	0.5
		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	< 0.2
		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.2
	2003	1	19-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ⁽⁴⁾				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-17S ⁽⁴⁾	1995	1	24-Feb-95	< 0.3	0.6	0.3	1.9	11
		2	13-Jun-95	0.2	< 0.14	0.18	< 0.5	< 1.1
		3		NS	NS	NS	NS	NS
		4	7-Dec-95	< 0.1	< 0.14	< 0.14	0.63	< 1.2
	1996	1		NS	NS	NS	NS	NS
		2	14-Jun-96	< 0.1	< 0.14	< 0.14	< 0.5	< 1.3
		3		NS	NS	NS	NS	NS
		4	12-Dec-96	< 0.1	< 0.14	< 0.14	< 0.5	1.5
	1997	1		NA	NA	NA	NA	NA
		2	14-Aug-97	< 0.2	< 0.14	< 0.14	< 0.5	< 1.3
		3		NS	NS	NS	NS	NS
		4		NS	NS	NS	NS	NS
	1998	1		NS	NS	NS	NS	NS
		2	4-Jun-98	< 0.2	< 0.14	< 0.14	1.2	6.1
		3		NS	NS	NS	NS	NS
		4	1-Dec-98	< 0.2	< 0.14	< 0.14	< 0.5	6
	1999	1		NS	NS	NS	NS	NS
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.1
		3		NS	NS	NS	NS	NS
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	40
	2000	1		NS	NS	NS	NS	NS
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
		3		NS	NS	NS	NS	NS
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
DEHP found in lab blank	2001	2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	1.8
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	9.6
	2002	1	6-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	1.0
Sample designation DUP01		1 duplicate	6-Mar-01	< 0.28	< 0.26	< 0.26	< 0.25	1.6
DEHP found in lab blank		2	20-May-02	< 0.22	< 0.18	< 0.24	< 0.2	0.6
		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.2
		4	21-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.2
	2003	1	19-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(b)				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-21 ⁽¹⁾	1999	1	21-Jan-99	< 0.2	< 0.14	< 0.14	< 0.5	< 4.2
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.2
		3	22-Jul-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.3
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.1
	2000	1	17-Jan-00	< 0.31	< 0.38	< 0.34	< 0.4	6
		1 duplicate	17-Jan-00	NA	NA	NA	NA	< 4.2
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.24	< 2.1
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
DEHP found in lab blank	2001	1	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	2.7
DEHP found in lab blank		2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	0.9
		3	24-Jul-01	< 0.28	< 0.26	< 0.26	< 0.25	0.9
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	0.6
	2002	1	6-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	1.3
DEHP found in lab blank		2	22-May-02	< 0.22	< 0.18	< 0.24	< 0.2	1
		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.3
Sample designation DUPE-001		3 duplicate	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.4
		4	19-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.3
	2003	1	18-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(b)					
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP	
				ug/l	ug/l	ug/l	ug/l	ug/l	
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30	
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30	
MW-22(R)	1995	1	21-Feb-95	< 0.3	57	< 0.3	260	8,500	
		2	13-Jun-95	< 2.5	311	< 3.5	955	380	
		3	13-Sep-95	< 2.5	171	< 3.5	693	NA	
		4	7-Dec-95	< 2	123	< 2.8	494	320	
	1996	1		NS	NS	NS	NS	NS	
		2	8-Jul-96	< 2	258	< 2.8	941	70	
		3	17-Sep-96	< 2.5	359	< 3.5	1,320	NA	
		4	12-Dec-96	< 5	320	< 7	1,330	< 1.2	
	1997	1		NS	NS	NS	NS	NS	
		2	14-Aug-97	< 200	5,730	< 140	32,900	7,500	
		3	3-Oct-97	< 400	11,400	< 280	66,000	NA	
		4		NS	NS	NS	NS	NS	
	1998	1	12-Mar-98	< 200	4,070	348	20,600	NA	
		2	4-Jun-98	< 40	2,280	< 28	11,300	5,800	
		3	28-Aug-98	< 50	1880	< 35	10300	NA	
		3 duplicate	28-Aug-98	< 50	2,510	< 35	11,000	NA	
	1999	4	20-Nov-98	< 40	1,850	< 28	7,230	1,100	
		1	21-Jan-99	< 0.4	18	< 0.28	84	NA	
		2	15-Apr-99	< 31	1,500	< 34	7,600	670	
		3	22-Jul-99	< 31	1,200	42	5,200	NA	
		4	25-Oct-99	< 16	810	< 17	3,300	1200	
		4 duplicate	25-Oct-99	< 31	840	< 34	3,400	1600	
		2000	1	17-Jan-00	< 7.8	360	< 8.5	1,400	NA
			Dilution Factor 50	2	13-Apr-00	< 12	820	< 14	3,600
	Dilution Factor 200		3	31-Jul-00	< 50	1,000	< 54	4,800	NA
	Dilution Factor 50 and 250 for DEHP and BTEX respectively		4	30-Oct-00	< 62	1,200	< 68	6,200	5,100
	Dilution Factor 200	2001	1	27-Feb-01	< 50	1,900	< 54	9,000	NA
	Dilution Factor 20 and 100 for DEHP and BTEX respectively. DEHP found in lab blank		2	2-Apr-01	< 28	910	< 26	4,100	2,400
	Dilution factor 100 for BTEX, 50 for DEHP. DEHP detected in field blank		3	24-Jul-01	< 28	1,100	< 26	5,300	8,200
	Dilution Factor 100		4	28-Oct-01	< 28	980	< 26	4,700	15,000
	Dilution Factor 100		4 duplicate	28-Oct-01	< 28	1,000	< 26	4,900	NA
	Dilution factors - 10 for BTEX, 2 for DEHP	2002	1	6-Mar-02	< 2.8	140	< 2.6	420	18
	Dilution factors - 50 for BTEX, 1 for DEHP		2	22-May-02	< 11	320	< 12	1,400	21
	Dilution factors - 50 for BTEX, 1 for DEHP		3	13-Aug-02	< 11	180	< 12	1,400	13
	Dilution factor - 25 for BTEX		4	20-Nov-02	< 5.5	310	< 6	1,000	B 6.3
	Dilution factor - 5 for total xylenes and ethylbenzene	2003	1	18-Mar-03	< 1	540	< 0.2	2,000	54.0

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ⁽⁴⁾				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
MW-25(R)	1995	1		NS	NS	NS	NS	NS
		2	14-Jun-95	< 0.2	< 0.2	< 0.2	< 1	1.6
		3	13-Sep-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	7-Dec-95	< 0.1	< 0.14	< 0.14	< 0.5	68
	1996	1		NS	NS	NS	NS	NS
		2	14-Jun-96	< 0.1	< 0.14	< 0.14	< 0.5	< 1.2
		3	17-Sep-96	< 0.1	0.34	< 0.14	2.2	NA
		4	12-Dec-96	< 0.1	< 0.14	< 0.14	< 0.5	< 1.3
	1997	1	7-Apr-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	14-Aug-97	< 0.2	13.5	< 0.14	89	63
		3	3-Oct-97	< 0.2	4.1	< 0.14	30.7	NA
		4		NS	NS	NS	NS	NS
	1998	1	12-Mar-98	< 0.2	0.33	< 0.14	1.5	NA
		1 duplicate	12-Mar-98	< 0.2	0.39	< 0.14	0.94	NA
		2	4-Jun-98	< 0.2	< 0.14	< 0.14	< 0.5	5.3
		3	28-Aug-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4	20-Nov-98	< 0.2	< 0.14	< 0.14	< 0.5	1.9
	1999	1	21-Jan-99	< 0.2	< 0.14	< 0.14	< 0.5	< 4.3
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	14	< 4.1
		3	22-Jul-99	< 0.31	< 0.38	< 0.34	1.4	9.6
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.2
	2000	1	1-Mar-00	< 0.31	< 0.38	< 0.34	< 0.4	< 3.5
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
Field ID: MW-25RD		3 duplicate	31-Jul-00	NA	NA	NA	NA	< 2
		4	30-Oct-00	< 0.25	0.33	< 0.27	1.1	3.4
DEHP found in lab blank	2001	1	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	1.9
DEHP found in lab blank		2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	1.4
		3	24-Jul-01	< 0.28	< 0.26	< 0.26	< 0.25	0.5
Field ID: MW-25D		3 duplicate	24-Jul-01	NA	NA	NA	NA	1.2
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	0.7
	2002	1	6-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	0.5
DEHP found in lab blank		2	22-May-02	< 0.22	< 0.18	< 0.24	< 0.2	1.1
		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.2
		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	< 0.3
Dupe-01		4 duplicate	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.2
	2003	1	18-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ^(a)				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
Trip Blank	1995	1	27-Feb-95	< 0.3	< 0.3	< 0.3	< 1	NA
		2	12-Jun-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
		3	12-Sep-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	7-Dec-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
	1996	1	6-Mar-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		2	12-Jun-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		3	16-Sep-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	12-Dec-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
	1997	1	7-Apr-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	13-Aug-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		3	3-Oct-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4		NS	NS	NS	NS	NS
	1998	1	12-Mar-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	4-Jun-98	< 0.2	< 0.14	< 0.14	< 0.5	ND
		3	28-Aug-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4	20-Nov-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
	1999	1	21-Jan-99	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	< 0.4	NA
		3	22-Jul-99	NA	NA	NA	NA	< 4.2
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	NA
	2000	1	17-Jan-00	NA	NA	NA	NA	< 4.1
		1	1-Mar-00	NA	NA	NA	NA	< 3.8
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	NA
		3	31-Jul-00	NA	NA	NA	NA	< 2
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	NA
DEHP found in lab blank	2001	1	27-Feb-01	NA	NA	NA	NA	0.6
		2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	NA
Performed for Lab No. N067 (MW22R DEHP sample). STL forgot to sample DEHP at this well on first round		3	24-Jul-01	NA	NA	NA	NA	< 0.4
		3	24-Jul-01	NA	NA	NA	NA	< 0.4
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	NA
	2002	1	5-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	NA
		2	20-May-02	< 0.22	< 0.18	< 0.24	< 0.2	NA
		3	12-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	180
TB-01		4	19-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.2
	2003	1	19-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ⁽⁴⁾				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
RINAate Sample	2002	1		ND	ND	0.7	ND	2.5
DEHP found in lab blank		2	22-May-02	< 0.22	< 0.18	< 0.24	< 0.2	3.4
RINAate -001		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	4.5
RINAate-01		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.3
	2003	1	19-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ⁽¹⁾				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30
Field Blank	1995	1	27-Feb-95	< 0.3	< 0.3	< 0.3	< 1	< 1.1
		2	13-Jun-95	< 0.1	< 0.14	< 0.14	< 0.5	1.3
		3	13-Sep-95	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	7-Dec-95	< 0.1	< 0.14	< 0.14	< 0.5	< 1.2
	1996	1	7-Mar-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		2	14-Jun-96	< 0.1	< 0.14	< 0.14	< 0.5	< 1.4
		3	17-Sep-96	< 0.1	< 0.14	< 0.14	< 0.5	NA
		4	12-Dec-96	< 0.1	< 0.14	< 0.14	< 0.5	< 1.2
	1997	1	7-Apr-97	< 0.2	< 0.14	0.2	< 0.5	NA
		2	14-Aug-97	< 0.2	< 0.14	< 0.14	< 0.5	< 1.1
		3	3-Oct-97	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4		NS	NS	NS	NS	NS
	1998	1	12-Mar-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		2	4-Jun-98	< 0.2	< 0.14	< 0.14	< 0.5	< 1.1
		3	28-Aug-98	< 0.2	< 0.14	< 0.14	< 0.5	NA
		4	20-Nov-98	< 0.2	< 0.14	< 0.14	< 0.5	1.3
	1999	1	21-Jan-99	< 0.2	< 0.14	< 0.14	< 0.5	< 4.4
		2	15-Apr-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.4
		3	22-Jul-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.3
		4	25-Oct-99	< 0.31	< 0.38	< 0.34	< 0.4	< 4.6
	2000	1	17-Jan-00	< 0.31	< 0.38	< 0.34	< 0.4	< 4.2
		1	1-Mar-00	< 0.31	< 0.38	< 0.34	< 0.4	< 4.2
		1	16-Mar-00	NA	NA	NA	NA	3.2
		2	13-Apr-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
		3	31-Jul-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
		4	30-Oct-00	< 0.25	< 0.27	< 0.27	< 0.25	< 2
DEHP found in lab blank	2001	1	27-Feb-01	< 0.25	< 0.27	< 0.27	< 0.25	1.3
DEHP found in lab blank		2	2-Apr-01	< 0.28	< 0.26	< 0.26	< 0.25	2
Performed for Lab No. N087 (MW22R DEHP sample). STL forgot to sample DEHP at this well on first round		3		NA	NA	NA	NA	1.2
		3	24-Jul-01	< 0.28	< 0.26	< 0.26	< 0.25	< 0.5
		4	26-Oct-01	< 0.28	< 0.26	< 0.26	< 0.25	< 0.4
	2002	1	6-Mar-02	< 0.28	< 0.26	< 0.26	< 0.25	16
		2	22-May-02	< 0.22	< 0.18	< 0.24	< 0.2	130
FB-001		3	13-Aug-02	< 0.22	< 0.18	< 0.24	< 0.2	0.5
FB-01		4	20-Nov-02	< 0.22	< 0.18	< 0.24	< 0.2	B 0.4
	2003	1	19-Mar-03	< 0.2	< 0.2	< 0.2	< 0.6	< 0.1

TABLE 5

THROUGH 1ST QUARTER 2003

L.E. CARPENTER - Wharton, New Jersey
Quarterly Groundwater Monitoring Data

MONITORING WELLS	SAMPLING DATE			CHEMICAL ANALYSIS RESULTS ⁽¹⁾				
	YEAR	QUARTER	SAMPLING DATE	Benzene	Ethylbenzene	Toluene	Total Xylenes	DEHP
				ug/l	ug/l	ug/l	ug/l	ug/l
	NEW JERSEY GROUNDWATER QUALITY STANDARDS (NJGWQS)			1	700	1,000	40	30
		PRACTICAL QUANTIFICATION LIMIT (PQL)		1	5	5	2	30

GENERAL NOTES PAGE

LEGEND

ug/L: micrograms per liter

NJGWQS: New Jersey Groundwater Quality Standards

NS: Not Sampled

NA: Not Analyzed

duplicate: Duplicate sample

B: Analyte found in laboratory blank as well as sample.

DEHP: bis-2-Ethylhexylphthalate

SAMPLING NOTES

- (1) MW-21 Quarterly sampling required for both DEHP and BTEX as of NJDEP letter dated Nov 23, 1998
- (2) MW-11(IR) & MW-11(DR) sampled for both DEHP and BTEX per NJDEP letter dated Nov 23, 1998 (one time sample round- baseline concentration)
- (3) MW-11D required to be sampled quarterly per NJDEP letter dated August 17, 1999. Third quarter 1999 sampling was performed prior to receiving the NJDEP letter. Subsequently, the well was only sampled for DEHP. Starting 4th quarter 1999, MW-11D will be sampled for both DEHP and BTEX. Based on NJDEP letter dated April 5, 2001, this well will be sampled for DEHP only (starting 2nd qtr 2001).
- (4) Well initially sampled Biannually - 2nd and 4th Quarter as of the beginning of 1998. 1st quarter 2002, well sampled quarterly for both DEHP and BTEX.
- (5) Low flow sampling initiated 1st quarter 2002.

15,000

Above the NJDEP NJGWQS

Section 4

Water Table Elevations

On March 18 and 20, 2003, RMT measured static groundwater levels from 75 different locations throughout the site (Table 6). Static groundwater levels were measured on March 20, 2003 at those location on or adjacent to the Air Product property due to site demolition activities occurring on the Air Products site on March 18 and 19, 2003. RMT used these data to calculate groundwater elevations and evaluate the groundwater flow pattern in the shallow aquifer system.

Figure 4 displays the site-wide shallow groundwater potentiometric surface, and indicates that groundwater flow direction in the shallow aquifer east of the rail spur is similar to that observed historically (generally toward the east). Groundwater levels across the site have risen which is likely due to the increase in regional precipitation seen throughout the northeastern portion of the United States, and a heavy rainfall event experienced at the site just prior to sampling. Also exhibited in Figure 4 are the effects caused by the presence of the drainage ditch and the Rockaway River. The drainage ditch acts as a local groundwater "sink", and shallow groundwater flow direction from a large portion of the site is controlled by the drainage ditch. Shallow groundwater at the southern edge of the LEC site is recharged directly by the Rockaway River and flows towards the site before turning eastward toward the drainage ditch and the narrow area between the Air Products property and the Rockaway River known as the Wharton Enterprises property. Shallow groundwater on the Air Products property flows southeast, south, and southwest towards the drainage ditch.

The potentiometric surface contours were generated using the measured fluid level elevations in site shallow wells. Some shallow well fluid elevations were not used to generate these contours because the observed values appeared to be in error, specifically, some of the wells denoted as "well points". We also used head values for the Rockaway River, the drainage ditch and the Washington Forge Reservoir to control and interpret the groundwater elevation contours.

Activities in the MW19/Hot Spot 1 area for the first quarter 2003 event were limited to groundwater level elevation measurements only. As in previous quarters, groundwater flow in this area is generally northwards and bends northeast (Figure 5). Previous sampling events have indicated that the general flow of groundwater in this area is controlled by the presence of the Washington Forge Reservoir, and the 24-inch Rockaway River Regional Interceptor Sewer (RRRIS), which is encased in a gravel - lined trench running parallel to Ross Street.

TABLE 6
L.E. Carpenter and Company, Wharton, New Jersey
Quarterly Groundwater Elevations

1st Quarter 2003

WELL LOCATION	WELL TYPE	WELL INSTALLATION AND CONSTRUCTION INFORMATION ⁽¹⁾										PROFESSIONAL SURVEY INFORMATION				ELEVATIONS (FT. MSL)			QUARTERLY MEASUREMENT INFORMATION ⁽²⁾						
		MANAGING CONSULTANT	INSTALLATION DATE	TOTAL WELL DEPTH (FT)	WELL DIAMETER (IN)	SCREEN MATERIAL	SLOT SIZE (IN)	TOP OF SCREEN (FT)	BOTTOM OF SCREEN (FT)	SCREENED INTERVAL (FT)	AQUIFER SYSTEM	BASELINE LOCATION (feet) ⁽³⁾		GEODETIC LOCATION		GROUND	CASING	WELL	MEAS. DATE	PRODUCT DEPTH	WATER DEPTH	PRODUCT ELEVATION	WATER ELEVATION	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL ELEVATIONS ⁽⁴⁾
		(Y) North	(X) East	LATITUDE	LONGITUDE																				
CW-1	Caisson Well	ROY F. WESTON	-	-	-	-	-	-	-	-	-	754247.22	471142.06	40° 54' 14.2"	74° 34' 34.7"	630.83	634.35	-	18-Mar-03	-	6.03	-	624.80	-	-
CW-3	Caisson Well	ROY F. WESTON	-	-	-	-	-	-	-	-	-	754203.93	471309.9	40° 54' 13.8"	74° 34' 32.5"	628.63	633.30	-	18-Mar-03	-	6.62	-	622.01	-	-
GEI-11	Piezometer	ROY F. WESTON	April to October 1989	44.34	2.00	PVC	0.02	31.62	41.62	10.00	I	754767.14	471095.56	40° 54' 19.3"	74° 34' 35.3"	628.44	630.93	630.78	18-Mar-03	-	3.95	-	626.83	-	-
GEI-21	Piezometer	ROY F. WESTON	April to October 1989	46.28	2.00	PVC	0.02	31.50	41.50	10.00	I	754573.99	470499.76	40° 54' 17.4"	74° 34' 43.1"	635.92	638.35	638.20	18-Mar-03	-	9.98	-	628.22	-	-
GEI-25	Piezometer	ROY F. WESTON	April to October 1989	22.21	2.00	PVC	0.02	10.00	20.00	10.00	S	754568	470506.18	40° 54' 17.3"	74° 34' 43.0"	635.46	637.87	637.67	18-Mar-03	-	9.95	-	627.72	-	-
GEI-31	Piezometer	ROY F. WESTON	April to October 1989	53.29	2.00	PVC	0.02	30.00	40.00	10.00	I	754568	470506.18	40° 54' 17.3"	74° 34' 43.0"	635.46	637.87	637.67	18-Mar-03	-	9.95	-	627.72	-	-
MW-1(R)	Monitoring Well	ROY F. WESTON	February 3, 1995	22.50	4.00	STEEL	0.01	7.00	22.50	15.50	S	754311.79	470453.7	40° 54' 14.8"	74° 34' 43.7"	637.56	639.99	639.85	18-Mar-03	-	12.09	-	627.76	-	-
MW-2(R)	Monitoring Well	ROY F. WESTON	January 30, 1995	13.00	2.00	PVC	0.01	2.00	12.00	10.00	S	754207.21	470825.97	40° 54' 13.8"	74° 34' 38.8"	635.79	635.78	635.47	18-Mar-03	6.64	9.22	626.83	626.25	0.58	626.79
MW-3	Monitoring Well	WEHRAN ENG.	May 15, 1980	27.00	2.00	STEEL	0.01	1.50	27.00	25.50	S	754272.74	471267.56	40° 54' 14.4"	74° 34' 33.1"	629.06	632.28	632.14	18-Mar-03	-	5.90	-	626.24	-	-
MW-4 (R)	Monitoring Well	WEHRAN ENG.	May 20, 1980	27.00	2.00	STEEL	0.01	1.50	27.00	25.50	S	754227.41	471302.82	40° 54' 14.0"	74° 34' 32.6"	628.64	632.27	632.56	18-Mar-03	6.18	6.72	626.38	625.84	0.54	626.35
MW-6(R)	Monitoring Well	ROY F. WESTON	January 25, 1995	10.98	2.00	PVC	0.02	0.98	10.98	10.00	S	754070.52	471162.53	40° 54' 12.4"	74° 34' 34.4"	628.86	632.31	632.50	18-Mar-03	-	5.56	-	626.94	-	-
MW-8 (R)	Monitoring Well	GROUNDWATER TECHNOLOGIES	1983	19.00	2.00	STEEL	0.02	0.00	19.00	19.00	S	754210.83	471191.61	40° 54' 13.8"	74° 34' 34.1"	629.82	632.64	632.42	18-Mar-03	-	4.72	-	627.70	-	-
MW-9 (R)	Monitoring Well	GROUNDWATER TECHNOLOGIES	1983	20.50	2.00	STEEL	0.02	0.50	20.00	19.50	S	754099.29	471251.06	40° 54' 12.7"	74° 34' 33.3"	627.99	630.56	628.79	18-Mar-03	-	3.85	-	624.94	-	-
MW-11S	Monitoring Well	ROY F. WESTON	April to October 1989	14.73	4.00	STEEL	0.02	4.37	14.41	10.00	S	754075.94	471111.03	40° 54' 12.5"	74° 34' 35.1"	629.21	631.69	630.18	18-Mar-03	-	4.11	-	626.07	-	-
MW-111(R)	Monitoring Well	RMT, INC.	February 20, 1998	52.00	2.00	STEEL	0.01	42.00	52.00	10.00	I	754226.73	471126.83	40° 54' 14.0"	74° 34' 34.9"	631.23	633.26	632.96	18-Mar-03	6.60	12.05	626.36	620.91	5.45	626.01
MW-11D(R)	Monitoring Well	RMT, INC.	February 20, 1998	157.00	2.00	STEEL	0.01	147.00	157.00	10.00	D	754237.94	471128.05	40° 54' 14.1"	74° 34' 34.9"	630.89	633.67	633.33	18-Mar-03	-	8.72	-	626.61	-	-
MW-12S(R)	Monitoring Well	ROY F. WESTON	May 7, 1990	14.45	4.00	PVC	0.02	2.45	14.45	12.00	S	754244.62	471124.66	40° 54' 14.2"	74° 34' 34.9"	630.66	633.35	633.09	18-Mar-03	-	4.21	-	628.88	-	-
MW-13S	Monitoring Well	ROY F. WESTON	April to October 1989	16.39	4.00	STEEL	0.02	5.37	15.14	10.00	S	754055.97	471042.34	40° 54' 12.3"	74° 34' 35.9"	632.17	634.86	634.33	18-Mar-03	-	6.73	-	627.60	-	-
MW-13S(R)	Monitoring Well	ROY F. WESTON	January 27, 1995	17.00	2.00	PVC	0.01	2.00	12.00	10.00	S	754353.97	471370.04	40° 54' 15.3"	74° 34' 31.7"	628.34	631.40	631.23	20-Mar-03	-	4.89	-	626.34	-	-
MW-131	Monitoring Well	ROY F. WESTON	July 31, 1989	46.30	2.00	STEEL	0.02	35.22	45.28	10.00	I	754333.07	471365.71	40° 54' 15.0"	74° 34' 31.8"	628.26	630.96	630.59	20-Mar-03	-	4.29	-	626.30	-	-
MW-14S	Monitoring Well	ROY F. WESTON	April to October 1989	15.46	4.00	STEEL	0.02	3.42	13.48	10.00	S	754337.8	471360.31	40° 54' 15.1"	74° 34' 31.9"	628.36	630.88	630.66	20-Mar-03	-	4.17	-	626.49	-	-
MW-141 (R)	Monitoring Well	ROY F. WESTON	April to October 1989	44.30	2.00	STEEL	0.02	33.22	43.26	10.00	I	754255.02	471423.66	40° 54' 14.3"	74° 34' 31.0"	625.78	628.63	628.41	18-Mar-03	-	2.83	-	625.58	-	-
MW-15S (R)	Monitoring Well	ROY F. WESTON	April to October 1989	25.94	4.00	STEEL	0.02	9.37	19.41	10.00	S	754250.22	471409.52	40° 54' 14.2"	74° 34' 31.2"	625.93	628.32	628.23	18-Mar-03	-	1.98	-	626.25	-	-
MW-151 (R)	Monitoring Well	ROY F. WESTON	July 17, 1989	43.92	2.00	STEEL	0.02	30.55	40.26	10.00	I	754326.58	470891.83	40° 54' 15.0"	74° 34' 38.0"	634.83	637.03	636.77	18-Mar-03	-	9.84	-	626.93	-	-
MW-16S	Monitoring Well	ROY F. WESTON	April to October 1989	23.90	4.00	STEEL	0.02	7.37	17.41	10.00	S	754325.8	470901.47	40° 54' 15.0"	74° 34' 37.9"	634.74	636.88	636.66	18-Mar-03	-	9.75	-	626.91	-	-
MW-161	Monitoring Well	ROY F. WESTON	April to October 1989	46.53	2.00	STEEL	0.02	32.22	42.26	10.00	I	754424.11	470704.1	40° 54' 15.9"	74° 34' 40.4"	632.57	634.69	634.47	18-Mar-03	-	6.62	-	627.65	-	-
MW-17S (R)	Monitoring Well	ROY F. WESTON	April to October 1989	15.04	4.00	STEEL	0.02	4.37	14.41	10.00	S	754435.1	470710.17	40° 54' 16.0"	74° 34' 40.3"	632.43	635.08	634.96	18-Mar-03	-	7.51	-	627.45	-	-
MW-18S	Monitoring Well	ROY F. WESTON	April to October 1989	15.04	2.00	STEEL	0.02	5.20	15.24	10.00	S	754109.68	470759.85	40° 54' 12.8"	74° 34' 39.7"	632.95	634.92	634.79	18-Mar-03	-	7.37	-	627.42	-	-
MW-181	Monitoring Well	ROY F. WESTON	April to October 1989	44.69	2.00	STEEL	0.02	34.22	44.26	10.00	I	754677.95	471117.26	40° 54' 18.4"	74° 34' 35.0"	628.22	631.48	631.26	18-Mar-03	-	4.85	-	626.41	-	-
MW-19 (R)	Monitoring Well	ROY F. WESTON	May 20, 1991	17.00	4.00	STEEL	0.02	7.00	17.00	10.00	S	754675.11	471106.07	40° 54' 18.4"	74° 34' 35.2"	628.35	631.19	631.04	18-Mar-03	-	4.21	-	626.83	-	-
MW-19-1 (R)	Monitoring Well	RMT, INC.	February 17, 1998	17.00	4.00	STEEL	0.01	6.00	16.50	9.50	S	754537.15	470454.45	40° 54' 17.1"	74° 34' 43.7"	636.82	636.83	636.50	18-Mar-03	-	8.59	-	627.91	-	-
MW-19-2 (R)	Monitoring Well	RMT, INC.	February 17, 1998	16.00	4.00	STEEL	0.01	6.00	16.00	10.00	S	754534.62	470427.63	40° 54' 17.0"	74° 34' 44.0"	636.53	636.56	636.24	18-Mar-03	-	8.16	-	626.08	-	-
MW-19-3 (R)	Monitoring Well	RMT, INC.	February 18, 1998	16.00	4.00	STEEL	0.01	6.00	16.50	9.50	S	754551.81	470429.56	40° 54' 17.2"	74° 34' 44.0"	637.06	637.10	636.90	18-Mar-03	-	8.95	-	627.95	-	-
MW-19-4 (R)	Monitoring Well	RMT, INC.	February 18, 1998	16.00	4.00	STEEL	0.01																		

TABLE 6
L.E. Carpenter and Company, Wharton, New Jersey
Quarterly Groundwater Elevations

1st Quarter 2003

WELL LOCATION	WELL TYPE	WELL INSTALLATION AND CONSTRUCTION INFORMATION ⁽¹⁾										PROFESSIONAL SURVEY INFORMATION				ELEVATIONS (FT. MSL)			QUARTERLY MEASUREMENT INFORMATION ⁽²⁾						
		MANAGING	INSTALLATION	TOTAL WELL	WELL	SCREEN	SLOT	TOP OF	BOTTOM OF	SCREENED	AQUIFER	BASELINE LOCATION (feet) ⁽³⁾		GEODETIC LOCATION		GROUND	OUTER	INNER	MEAS.	PRODUCT	WATER	PRODUCT	WATER	PRODUCT	CORRECTED WATER
		CONSULTANT	DATE	DEPTH (FT)	DIAMETER (IN)	MATERIAL	SIZE (IN)	SCREEN (FT)	SCREEN (FT)	INTERVAL (FT)	SYSTEM	(Y) North	(X) East	LATITUDE	LONGITUDE				DATE	DEPTH	DEPTH	ELEVATION	ELEVATION	THICKNESS (ft)	LEVEL ELEVATIONS ⁽⁴⁾
WP-A1	Area A Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754220.52	470825.71	40° 54' 13.9"	74° 34' 38.6"	636.29	636.32	635.81	18-Mar-03	8.78	9.81	627.05	626.20	0.85	627.00
WP-A2	Area A Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754249.34	470813.05	40° 54' 14.2"	74° 34' 39.0"	637.31	639.62	639.19	18-Mar-03	-	12.24	-	626.95	-	-
WP-A3	Area A Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754195.42	470717.12	40° 54' 13.7"	74° 34' 40.3"	635.97	635.97	635.56	18-Mar-03	-	8.37	-	627.19	-	-
WP-A4	Area A Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754229.46	470855.24	40° 54' 14.0"	74° 34' 38.5"	635.63	635.66	635.10	18-Mar-03	8.47	11.26	626.63	623.84	2.79	626.45
WP-A5	Area A Well Point	ROY F. WESTON	1993	13.00	2.00	PVC	-	3.00	13.00	10.00	S	754266.54	470886.02	40° 54' 14.4"	74° 34' 38.1"	635.70	-	637.85	18-Mar-03	-	10.30	-	627.55	-	-
WP-A6	Area A Well Point	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	754184.69	470888.45	40° 54' 13.6"	74° 34' 38.0"	634.95	-	637.28	18-Mar-03	10.43	13.98	626.85	623.30	3.55	626.82
WP-A7	Area A Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754198.44	470999.43	40° 54' 13.7"	74° 34' 38.6"	632.94	-	634.88	18-Mar-03	7.95	10.55	626.93	624.33	2.60	626.76
WP-A8	Area A Well Point	ROY F. WESTON	1993	16.00	2.00	PVC	-	6.00	16.00	10.00	S	754260.25	470998.97	40° 54' 14.3"	74° 34' 38.6"	634.70	-	637.56	18-Mar-03	10.83	12.21	626.73	625.35	1.38	626.64
WP-B1	Area B Well Point	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	754184.12	470935.26	40° 54' 13.6"	74° 34' 37.4"	637.22	-	639.32	18-Mar-03	11.88	12.75	627.44	626.57	0.87	627.38
WP-B2	Area B Well Point	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	754218.63	471068.54	40° 54' 13.9"	74° 34' 35.7"	631.85	-	633.65	18-Mar-03	5.12	5.21	626.53	628.44	0.09	626.52
WP-B3	Area B Well Point	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	754282.8	471115.71	40° 54' 14.5"	74° 34' 35.1"	630.48	632.58	632.25	18-Mar-03	-	5.52	-	626.73	-	-
WP-B4	Area B Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754243.43	471088.51	40° 54' 14.2"	74° 34' 35.4"	631.71	-	633.33	18-Mar-03	-	5.89	-	627.44	-	-
WP-B5	Area B Well Point	ROY F. WESTON	1993	11.00	2.00	PVC	-	1.00	11.00	10.00	S	754275.31	471156.49	40° 54' 14.5"	74° 34' 34.5"	629.93	-	632.56	18-Mar-03	5.99	8.84	626.57	623.72	2.85	626.39
WP-B6	Area B Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754296.93	471181.49	40° 54' 14.7"	74° 34' 34.2"	630.03	-	632.11	18-Mar-03	-	4.61	-	627.50	-	-
WP-B7	Area B Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754171.56	471223.53	40° 54' 13.4"	74° 34' 33.7"	629.72	-	631.86	18-Mar-03	-	4.90	-	626.96	-	-
WP-B8	Area B Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754179.91	471330.82	40° 54' 13.5"	74° 34' 32.3"	627.82	-	629.49	18-Mar-03	-	3.55	-	625.94	-	-
WP-B9	Area B Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754319.10	471144.76	40° 54' 14.9"	74° 34' 34.7"	630.42	633.12	632.74	18-Mar-03	-	6.15	-	626.59	-	-
WP-C1	Area C Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754087.66	471038.32	40° 54' 12.6"	74° 34' 38.1"	632.81	-	633.51	18-Mar-03	-	5.91	-	627.60	-	-
WP-C2	Area C Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754075.97	471074.74	40° 54' 12.5"	74° 34' 35.6"	633.02	-	634.46	18-Mar-03	-	6.82	-	627.64	-	-
WP-C3	Area C Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754068.60	471009.58	40° 54' 12.4"	74° 34' 36.4"	631.00	-	632.64	18-Mar-03	-	4.96	-	627.68	-	-
WP-C4	Area C Well Point	ROY F. WESTON	1993	-	-	-	-	-	-	-	-	754108.93	471050.74	40° 54' 12.8"	74° 34' 35.9"	632.44	-	633.27	18-Mar-03	-	5.91	-	627.36	-	-

FOOTNOTES

- (1) Elevation measured at the top of a 3.33 ft. Staff gauge. Water depth based on a visual observation of the water level on the Staff gauge.
- (2) Corrected water level elevations utilize an average specific gravity of 0.9363 (RMT, Inc. product sampling in October 1999 @ MW-1(R); EFR-11 & WP-A8)
- (3) Wells included in the quarterly sampling program. Depth to water recorded before purging
- (4) Wells installed during new RI efforts per NJDEP and EPA request to further delineate MW19/Hot Spot 1 Area
- (5) No boring log or well construction diagram available. Well specific information determined from Weston Geologic Cross Section
- (6) "-" in the Quarterly Measurement Information section of this database indicates that the presence of free product was NOT detected at any measurable thickness and therefore did not generate a product elevation, product thickness nor require water level elevation to be correct
- (7) "-" in the Well Installation and Construction Information section indicates that well construction logs were not available for review
- (8) Horizontal Datum: New Jersey State Plane Coordinate System NAD 83. Vertical Datum: NGVD 29
- (9) All "19 series" wells were resurveyed August 8, 2001 at owners request. Wells MW19 through MW19-5 were converted to flush mount wells to allow for through traffic. Professional survey performed by James M. Stewart, Inc., Philadelphia, PA

GENERAL NOTES

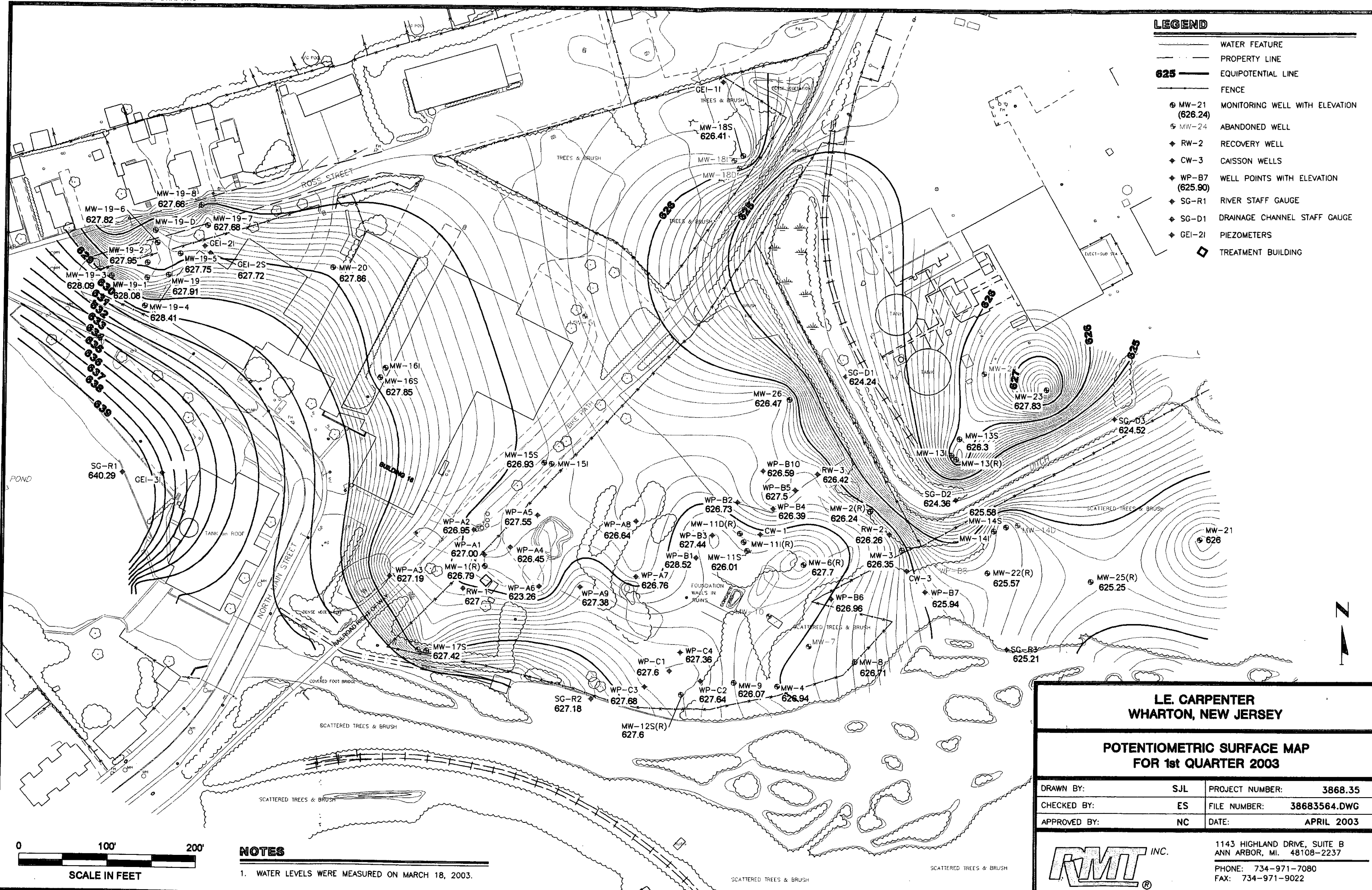
All WP-series wells finished elevation is 2 feet above nominal grade. Total depth of well only accounts for subsurface structure
Wells MW-1A, MW5, MW-7, MW-10, MW-11, MW-11D, MW-14D, MW-17D, MW-18D, MW-22, MW-24, MW-25, WP-B8, WP-D1, PZ-6A, PZ-2A(R), PZ-2AS, RW-1 have been abandoned
Wells MW-11(R), MW11-D(R), MW-1(R), MW-2(R), MW-6(R), MW-22(R), and MW-25(R) are replacement wells

LEGEND

S: Shallow Aquifer System
I: Intermediate Aquifer System
D: Deep Aquifer System
R: Replacement Well
NAS: Not Assessable
REM: Removed
-: Value of 0.00. Free Product not encountered at well

LEGEND

- WATER FEATURE
- PROPERTY LINE
- 625** — EQUIPOTENTIAL LINE
- FENCE
- ⊕ MW-21 (626.24) MONITORING WELL WITH ELEVATION
- ⊕ MW-24 ABANDONED WELL
- ⊕ RW-2 RECOVERY WELL
- ⊕ CW-3 CAISSON WELLS
- ⊕ WP-B7 (625.90) WELL POINTS WITH ELEVATION
- ⊕ SG-R1 RIVER STAFF GAUGE
- ⊕ SG-D1 DRAINAGE CHANNEL STAFF GAUGE
- ⊕ GEI-21 PIEZOMETERS
- ◊ TREATMENT BUILDING



NOTES

1. WATER LEVELS WERE MEASURED ON MARCH 18, 2003.

**L.E. CARPENTER
WHARTON, NEW JERSEY**

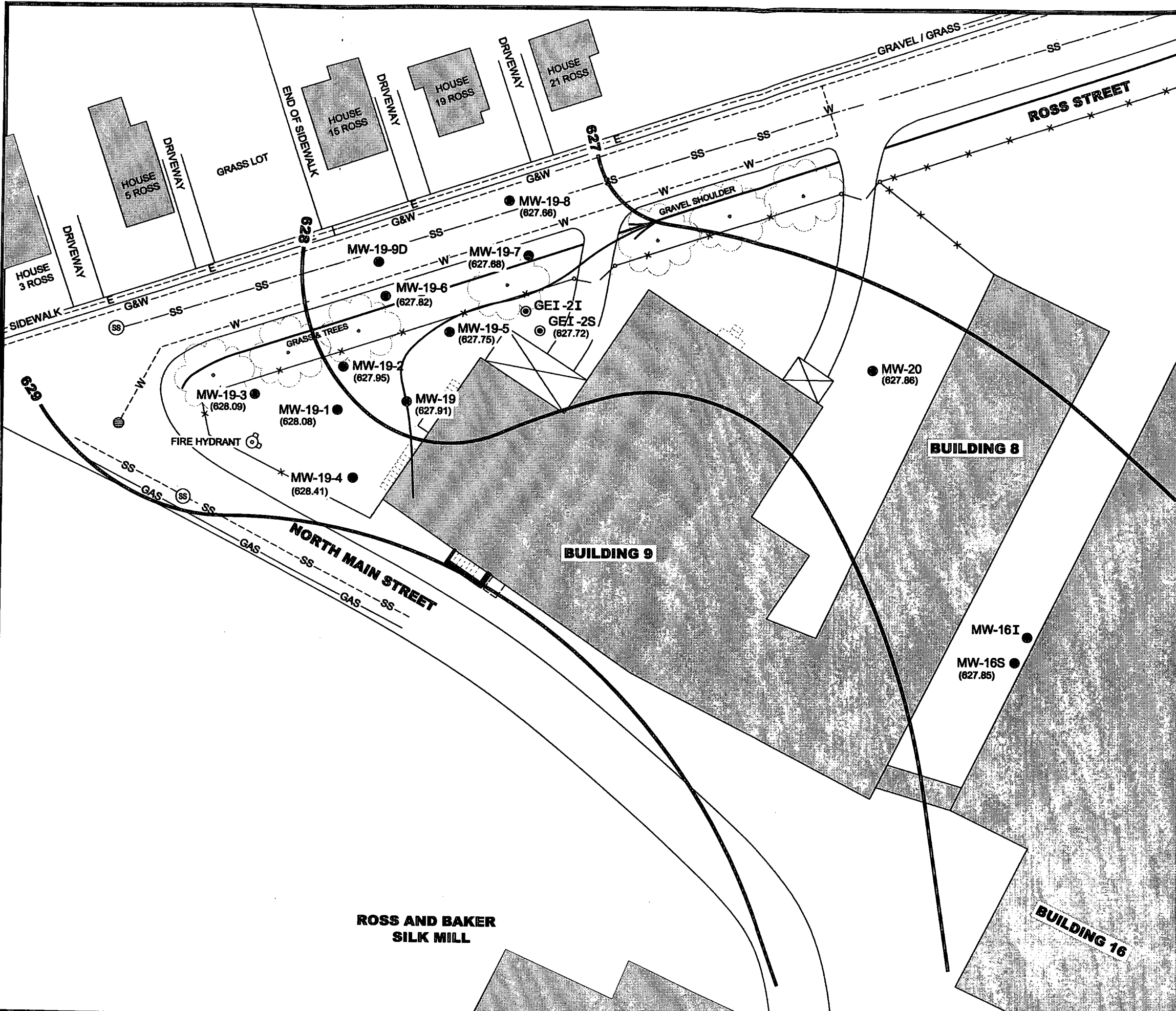
POTENTIOMETRIC SURFACE MAP FOR 1st QUARTER 2003

DRAWN BY:	SJL	PROJECT NUMBER:	3868.35
CHECKED BY:	ES	FILE NUMBER:	38683564.DWG
APPROVED BY:	NC	DATE:	APRIL 2003



1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237
PHONE: 734-971-7080
FAX: 734-971-9022

PLOT DATA
 Drawing Name: J:\03868\35\38683565.dwg
 Operator Name: lucidos
 Scale: 1"=40'
 Dwg Size: 175411 Bytes
 Plot Date: Tuesday, April 15, 2003
 Plot Time: 07:30:09 AM
 Attached Xref's: No xref's Attached.

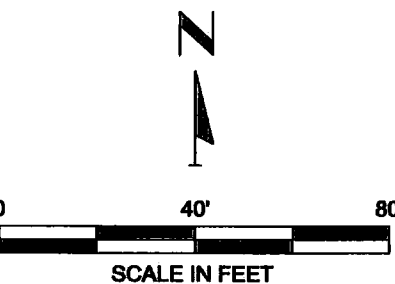


LEGEND

- X— FENCE LINE
- SS--- APPROXIMATE LOCATION OF ROCKAWAY RIVER REGIONAL INTERCEPTOR SEWER
- 627 — GROUNDWATER ELEVATION CONTOUR
- MW-19-7 (627.68) ● MONITORING WELL LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- GEI-2S (627.72) ⊙ GEOPROBE INSTALLED PIEZOMETER LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- SS--- SANITARY SEWER
- G&W--- GAS AND WATER
- E--- ELECTRIC
- W--- WATER
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES

1. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON MARCH 18, 2003.



LE CARPENTER
 WHARTON, NEW JERSEY

MW-19 / HOT SPOT 1 GROUNDWATER ELEVATION CONTOURS FOR 1st QUARTER 2003

DRAWN BY:	SJL	PROJECT NUMBER:	3868.35
CHECKED BY:	ES	FILE NUMBER:	38683565.DWG
APPROVED BY:	NC	DATE:	APRIL 2003

RMT INC.

1143 HIGHLAND DRIVE, SUITE B
 ANN ARBOR, MI. 48108-2237
 PHONE: 734-971-7080
 FAX: 734-971-9022

Section 5

Drainage Channel Surface Water Sampling

As part of the first quarter 2003 event, RMT sampled the eastern drainage channel that separates the adjacent Air Products facility from the LEC site and the adjacent Wharton Enterprises property. This sampling was conducted at the request of NJDEP as outlined in their letter dated May 31, 2002. As requested in the NJDEP letter dated November 4, 2002, grab sampling was performed in the three locations along this channel (SW-5, SW-7 and SW-8). Sampling started with the downstream location SW-8 and proceeded to upstream location SW-7. As previously seen, the drainage ditch controls shallow groundwater pressure heads and flow direction as described above.

The presence of DEHP or BTEX compounds was not detected at either SW-5 or SW-7. The surface water sample collected at SW-8 contained very low levels of ethylbenzene (0.91 ug/L) and total xylenes (2.7 µg/L). Both analytes are "J-qualified" meaning they were estimated values falling between the MDL and the Limit of Quantitation (LOQ). These concentrations are below the surface water quality criteria for toxic substances outlined in N.J.A.C 7:9B-1.14 and NJGWQS. Historical and current surface water sampling results are summarized in Table 7.

These data show that BTEX and DEHP constituents dissolved in groundwater are naturally attenuating, and that migration of these primary constituents of concern is not taking place at levels above applicable standards in surface water within the drainage channel nor in groundwater beyond MW-25(R) located on the Wharton Enterprises property. In other words, the area of on-site free product results in a downgradient "halo" of dissolved phase contaminants in groundwater that make up a stable (non-expanding) plume. Future site monitoring activities will include surface water sample collection at the same three locations.

In addition, the NJDEP letters dated November 4, 2002, and March 26, 2003 recommend further evaluation of groundwater discharge to the drainage ditch be accomplished by means of polyethylene or passive diffusion bag (PDB) samplers. However, as described above in Section 3.1, RMT has advised LEC to not use PDB samplers because significant amounts of DEHP are known to leach from these devices, and semi-volatile organic compounds such as DEHP cannot efficiently diffuse into PDB sampler bags. Lack of DEHP and other organic constituents in surface water of the drainage ditch is not surprising considering the data from other wells on-site that show these constituents are not migrating beyond 25-50 feet downgradient from impacted wells. As discussed in Section 3.1, additional wells will be installed as part of the

post-remediation verification well network, and as part of implementing the approved natural attenuation work plan.

TABLE 7
L.E. CARPENTER - Wharton, New Jersey
Surface Water Monitoring Data

THROUGH 1ST QUARTER 2003

	ROCKAWAY RIVER			INFILTRATION GALLERY	DRAINAGE DITCH																ROCKAWAY RIVER		
	SW-1	SW-2	SW-3	SW-4	SW-5					SW-6	SW-7				SW-8						SW-9	SW-10	
SAMPLING DATE	03/14/89 ⁽¹⁾	03/14/89 ⁽¹⁾	03/14/89 ⁽¹⁾	03/14/89 ^{(1)(K)}	08/02/89 ⁽¹⁾	5/29/98 ⁽¹⁾	06/06/02	11/21/02	03/20/03	03/14/89 ⁽¹⁾	08/27/90	5/29/98 ⁽¹⁾	06/06/02	11/21/02	03/20/03	08/27/90	5/29/98 ⁽¹⁾	06/06/02	8/14/2002	11/21/2002	3/20/2003	08/28/90	08/28/90
VOLATILE ORGANIC COMPOUNDS (ug/l) ⁽⁴⁾																							
Methylene Chloride	J 1	ND	ND	ND	JP 3.8	ND	NA	NA	NA	J 3.8	⁽²⁾ ND	ND	NA	NA	NA	⁽²⁾ ND	ND	NA	NA	NA	NA	⁽²⁾ ND	⁽²⁾ ND
1,1,1-Trichloroethane	ND	ND	ND	ND	J 3.7	0.4	NA	NA	NA	ND	ND	0.5	NA	NA	NA	ND	ND	NA	NA	NA	NA	ND	ND
Ethylbenzene	ND	ND	ND	ND	J 3.5	ND	NA	< 0.18	< 0.2	ND	ND	ND	ND	< 0.18	< 0.2	ND	ND	ND	< 0.18	< 0.18	J 0.91	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	NA	NA	NA	J 1.2	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	NA	NA	ND	ND
Total Xylenes	ND	ND	ND	ND	44	ND	ND	< 0.2	< 0.6	ND	ND	ND	ND	NA	NA	ND	ND	NA	NA	NA	NA	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	1	< 0.24	< 0.2	ND	ND	ND	ND	< 0.2	< 0.6	ND	ND	ND	0.43	0.32	J 2.7	ND	ND
1,1,2-Trichloro-2,2,1-Trifluoroethane	ND	ND	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	NA	NA	NA	ND	ND	1	0.54	< 0.24	< 0.2	ND	ND
Benzene							ND	< 0.22	< 0.2				ND	< 0.22	< 0.2			ND	< 0.22	< 0.22	< 0.2		
BASE NEUTRAL COMPOUNDS (ug/l) ⁽⁴⁾																							
Di-n-butyl phthalate ⁽¹⁾	JP 3.2	JP 3.7	JP 3.8	JP 3.5	ND	ND	NA	NA	NA	JP 4	NA	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl) phthalate	ND	ND	ND	J 7.2	ND	ND	ND	B 0.3	< 1	ND	J ⁽²⁾ 7	ND	ND	B 0.4	< 1	NA	ND	0.6	1.3	B 0.4	< 1	J ⁽²⁾ 6	NA
METALS (ug/l) ⁽⁴⁾																							
Antimony	ND	ND	ND	J 22.8	ND	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Arsenic	ND	ND	J 2.4	ND	10	NA	NA	NA	NA	15.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Cadmium	ND	ND	ND	ND	ND	NA	NA	NA	NA	J 22.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	J 3.9	ND
Chromium	ND	ND	J 8	ND	ND	NA	NA	NA	NA	231	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Copper	J 16.7	J 5.3	J 22.1	J 6.7	ND	NA	NA	NA	NA	405	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Lead	20.7	ND	87.2	J 2.7	6	NA	NA	NA	NA	1340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Mercury	ND	ND	ND	ND	ND	NA	NA	NA	NA	2.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	J 4.6	ND
Nickel	ND	ND	ND	ND	ND	NA	NA	NA	NA	J 60.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Selenium	ND	ND	ND	ND	ND	NA	NA	NA	NA	7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Zinc	96.4	J 4.2	152	23	60	NA	NA	NA	NA	2,370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	J 5.4	ND
POLYCHLORINATED BIPHENYLS (PCBs) (ug/l) ⁽⁴⁾																							
Arochlor-1018	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arochlor-1221	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arochlor-1232	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arochlor-1242	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arochlor-1248	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arochlor-1254	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arochlor-1260	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Sediment Sampling Information
1989 GeoEngineering/Roy F. Weston sampling November 1989 VO-15 (EPA 624), BN-15 (EPA 625), PP Metals (EPA 200 series), PCBs (SW-4 only) (EPA 608) PP Metals (EPA 200 series), PCBs (SW-5 only) (EPA 608)
SW-1 Background sample location in Washington Forge Pond
SW-2 Assess impact on Rockaway River. Located immediately adjacent to Bldg. 12
SW-3 Assess impact on Rockaway River. Located downstream of former impoundment area
SW-4 Located in former infiltration gallery between former impoundment area and tank farm
SW-5 Located in the drainage ditch between LEC and Air Products
SW-6 Located in a drainage feature in Northeast corner, up by former Starch drying beds. Potential floor drain and non-contact cooling water impacts
1990 Roy F. Weston Supplemental RI (November 1990)
SW-7 Former outfall from northeast corner starch drying beds. (VOC-10, BN-10, PCB)
SW-8 Bend in drainage ditch. Assess downstream quality of drainage ditch (VOC-10)
SW-9 Junction of ditch and Rockaway River. Assess impact of ditch on river quality. (VOC-10, BN-10, PCB)
SW-10 Rockaway River south of MW-4. Assess impact of site on contaminants of Rockaway River. (VOC-10, TAL Metals)
2002 Sampling performed by RMT per the NJDEP letter dated May 31, 2002 (NJDEP/EPA review of Quarterly Monitoring Report - 1st Quarter 2002). During 2002 sampling event only SW-8 location sampled due drought conditions.

LEGEND
ug/L = micrograms per liter
SW = Surface water sample (Roy F. Weston nomenclature)
ND = No Detection
NA = Not Analyzed
Concentration data in BOLD above detection level
B = Compound detected in lab blank
NOTES
(1) NJDEP Tier 1 sample holding time was exceeded
(2) Compound detected in method blank. Sample concentration < 3x concentration in method blank
Per Tier 1 guidelines the result is negated
(3) All concentrations later negated by NJDEP
(4) Only those parameters listed showed concentrations above ND. All other parameters were either ND or NA
(5) Sampling performed by RMT per NJDEP request letter dated Jan 28, 1998
VOCs and Base Neutrals ONLY (EPA 624 and 625 respectively)
(6) The PCB sample (SW-4) was collected May 9, 1989
LABORATORY QUALIFIERS
J = Detected below reporting limit or is an estimated concentration
P = Compound detected in laboratory method blank
B = Analyte found in laboratory blank as well as sample

Section 6

Site Investigation and Remedial Actions

The following section briefly outlines additional activities and scope(s) of work performed at various on-site areas of environmental concern during first quarter 2003 and provides a brief discussion of activities anticipated for completion during second quarter 2003.

6.1 Free Product

In December 2001, RMT conducted a subsurface investigation to further investigate viable free product remedial technologies as outlined in the NJDEP approved workplan and amendment entitled Workplan to Evaluate Free Product Remedial Strategies (RMT, November 2001), and Amendment to Workplan to Evaluate Free Product Remedial Strategies (RMT, November 2001). Results of this investigation were submitted to USEPA and NJDEP in the document entitled Findings & Recommendations Regarding a Conceptual Free-Product Remediation Strategy in March 2002. NJDEP and USEPA comments were provided in the NJDEP letter dated July 26, 2002. Written responses to the comments outlined in the July 26, 2002 letter were provided to NJDEP and USEPA in the RMT response letter dated October 22, 2002. No written regulatory response has been provided to date, but all of the issues described in the comments and response letters were addressed at the meeting held in Edison New Jersey on September 19, 2002. Both the NJDEP and USEPA verbally approved the conceptual approach to free product remediation during that meeting. As such, RMT on behalf of LEC is committed to the preparation of a RAWP outlining both the engineering and design of the conceptual approach, and the various requirements (*i.e.*, plans, permits and approvals) needed to implement the remedy on-site. As was requested in the NJDEP letter dated January, 22, 2003, RMT submitted on March 4, 2003 a detailed schedule of all activities anticipated through remedial mobilization tentatively set at August 31, 2004.

6.2 Lead in Soils

In November 2001, RMT conducted a subsurface investigation as outlined in the Revised Workplan for Delineating and Characterizing Elevated Lead Concentrations in Soil (RMT, May 2001) to delineate the extent of on-site lead contamination in soils. Results of this investigation were submitted to USEPA and NJDEP in the document entitled Nature and Extent of Lead in Soils and Groundwater in March 2002. NJDEP and USEPA comments were provided in the NJDEP letter dated July 26, 2002. Written responses to the comments outlined in the July 26, 2002 letter were discussed at the September 19, 2002 meeting and also provided to NJDEP and USEPA in the RMT response letter dated October 22, 2002. As was required in the NJDEP letter

dated January 22, 2003, RMT on behalf of LEC, submitted the report entitled Focused Feasibility Study Lead-Impacted Soil Remediation (RMT, February 2003) so an Explanation of Significant Difference (ESD) can be prepared by NJDEP and USEPA documenting and approving this significant change in the current ROD remedial approach for lead soils of excavation and off-site disposal to excavation and on-site beneficial reuse.

Appendix A

Report Certification

REPORT CERTIFICATION
PURSUANT TO N.J.A.C. 7:26E-1.5

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Mr. Cristopher R. Anderson

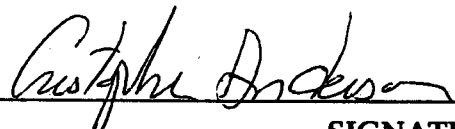
PRINTED NAME

Director, Environmental Services

TITLE

L.E. Carpenter & Company

COMPANY

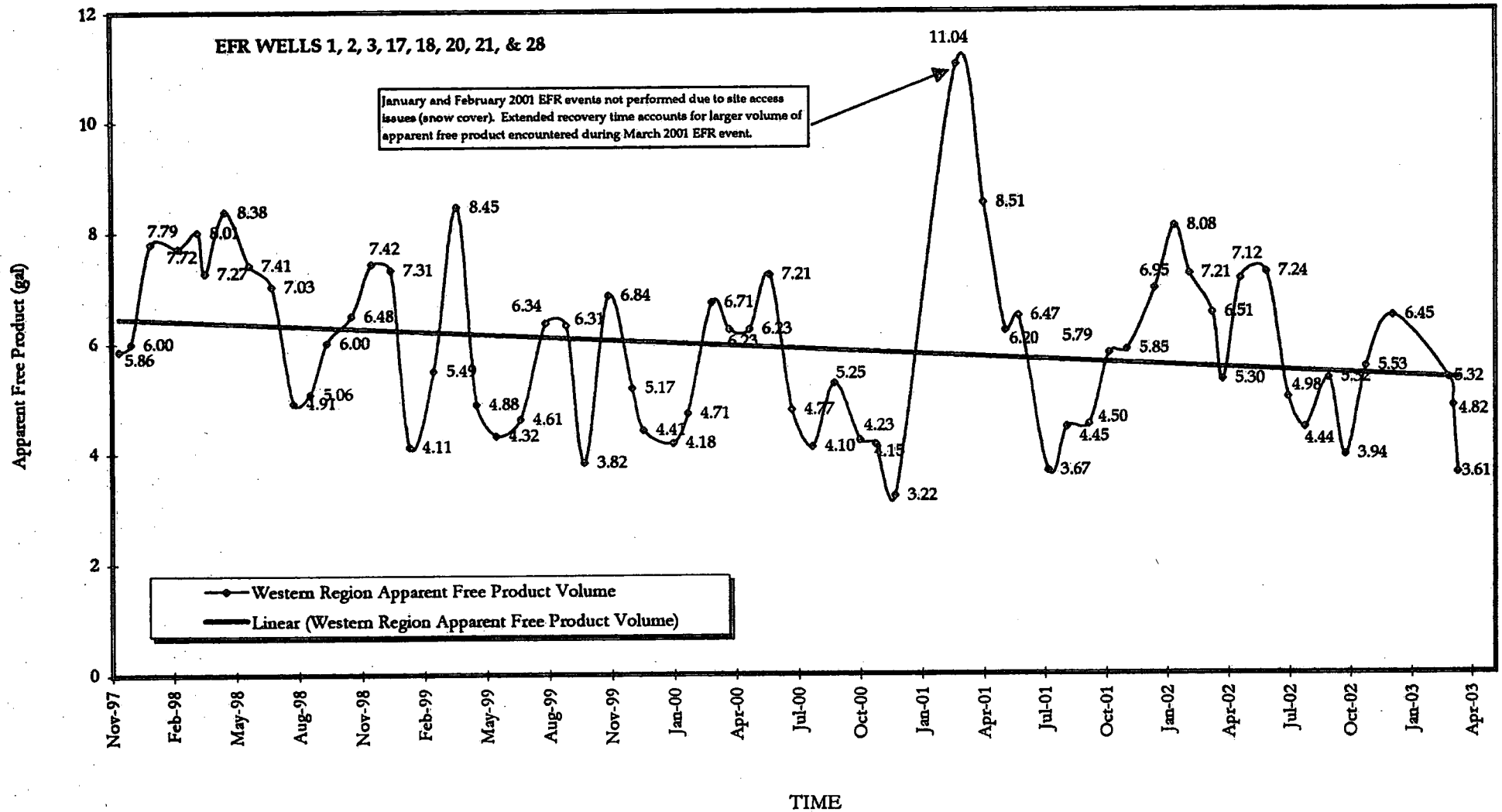

SIGNATURE

4/23/03
DATE

Appendix B
Apparent Free Product Volume Trend
Charts

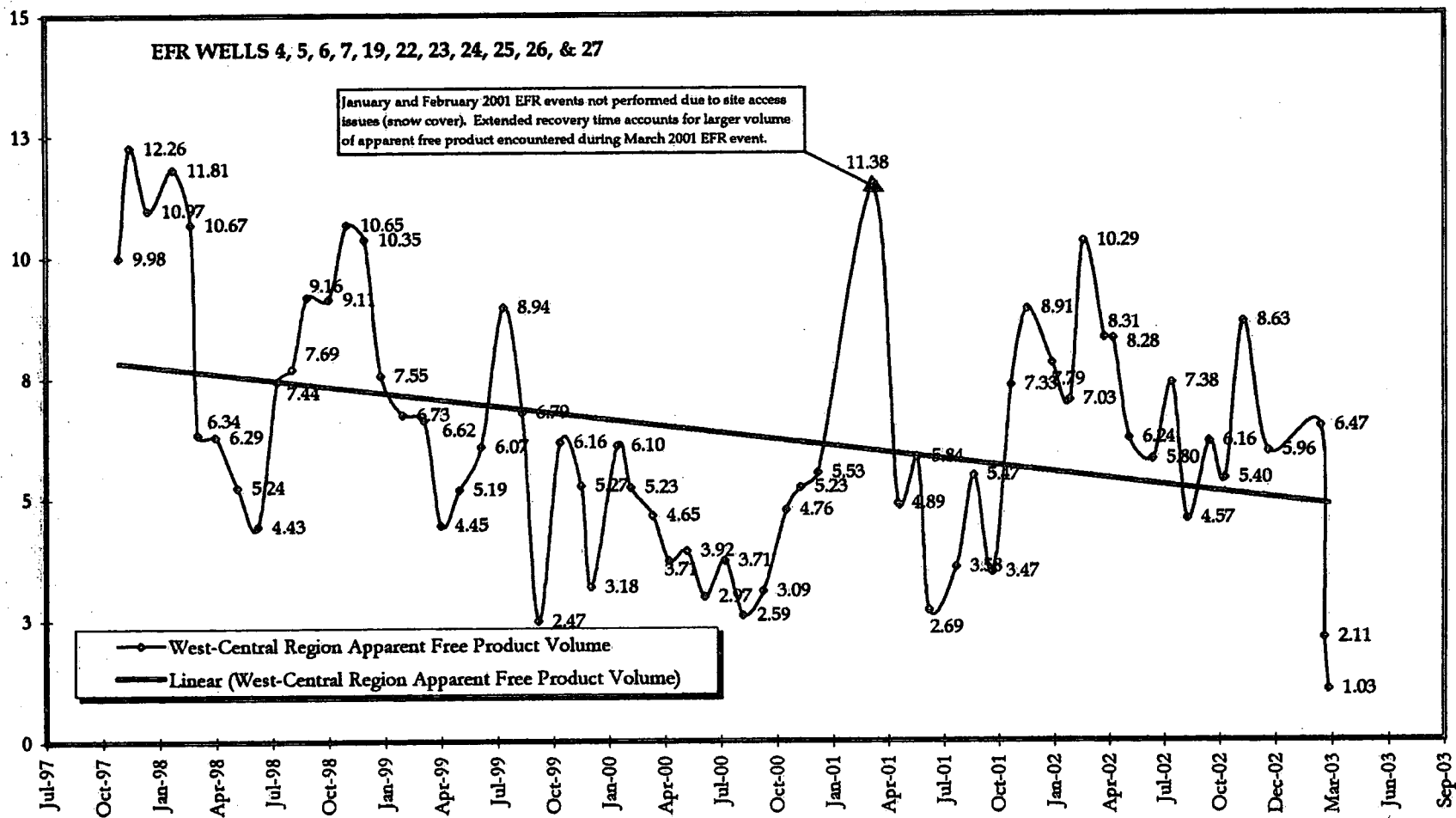
L.E. Carpenter and Company Western Region of Free Product

**Apparent Free Product Volume vs. Time
Through 1st Quarter 2003**



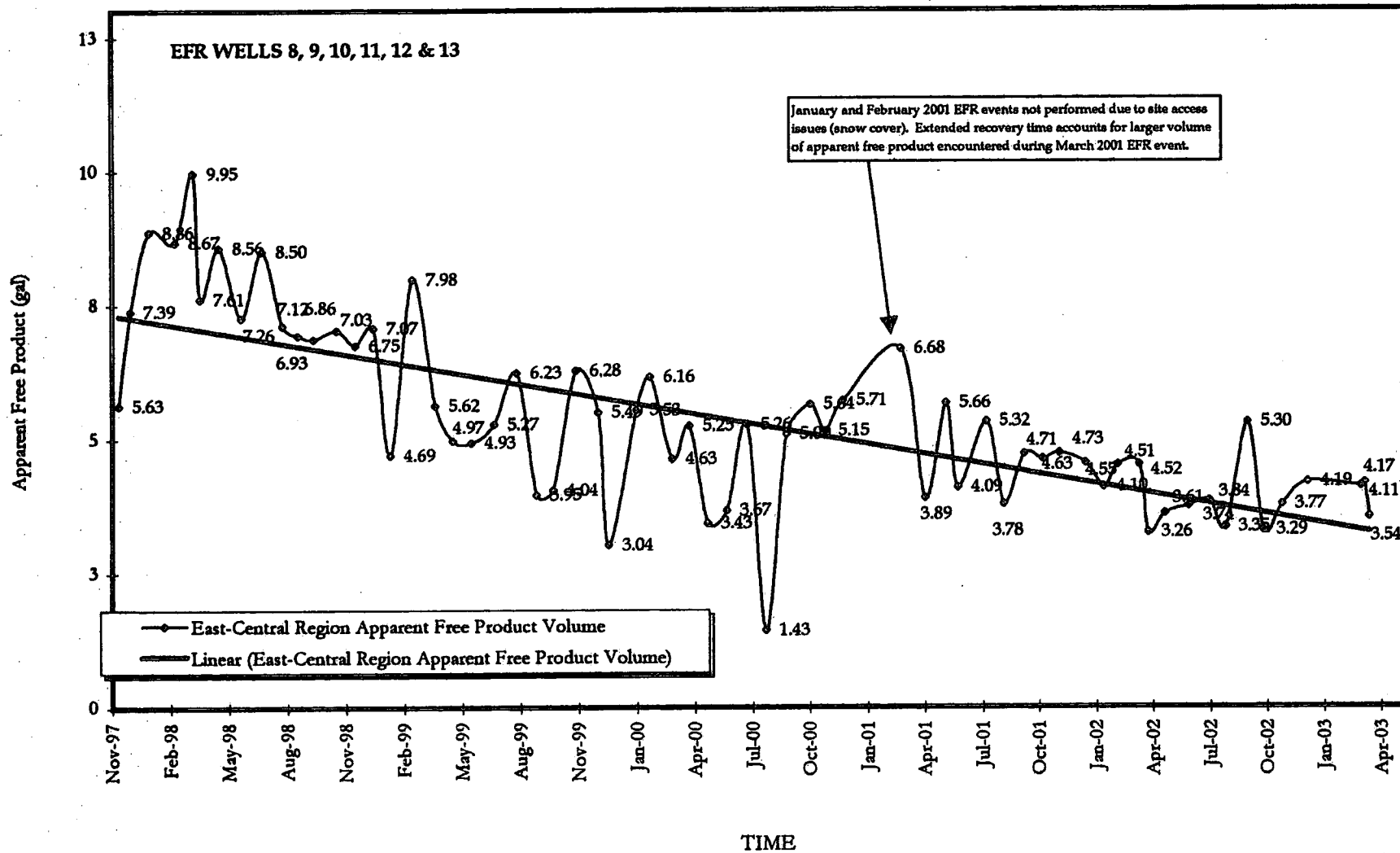
L.E. Carpenter and Company West-Central Region of Free Product

**Apparent Free Product Volume vs. Time
Through 1st Quarter 2003**

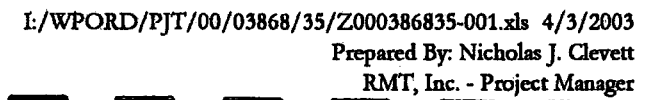


L.E. Carpenter and Company East-Central Region of Free Product

**Apparent Free Product Volume vs. Time
Through 1st Quarter 2003**

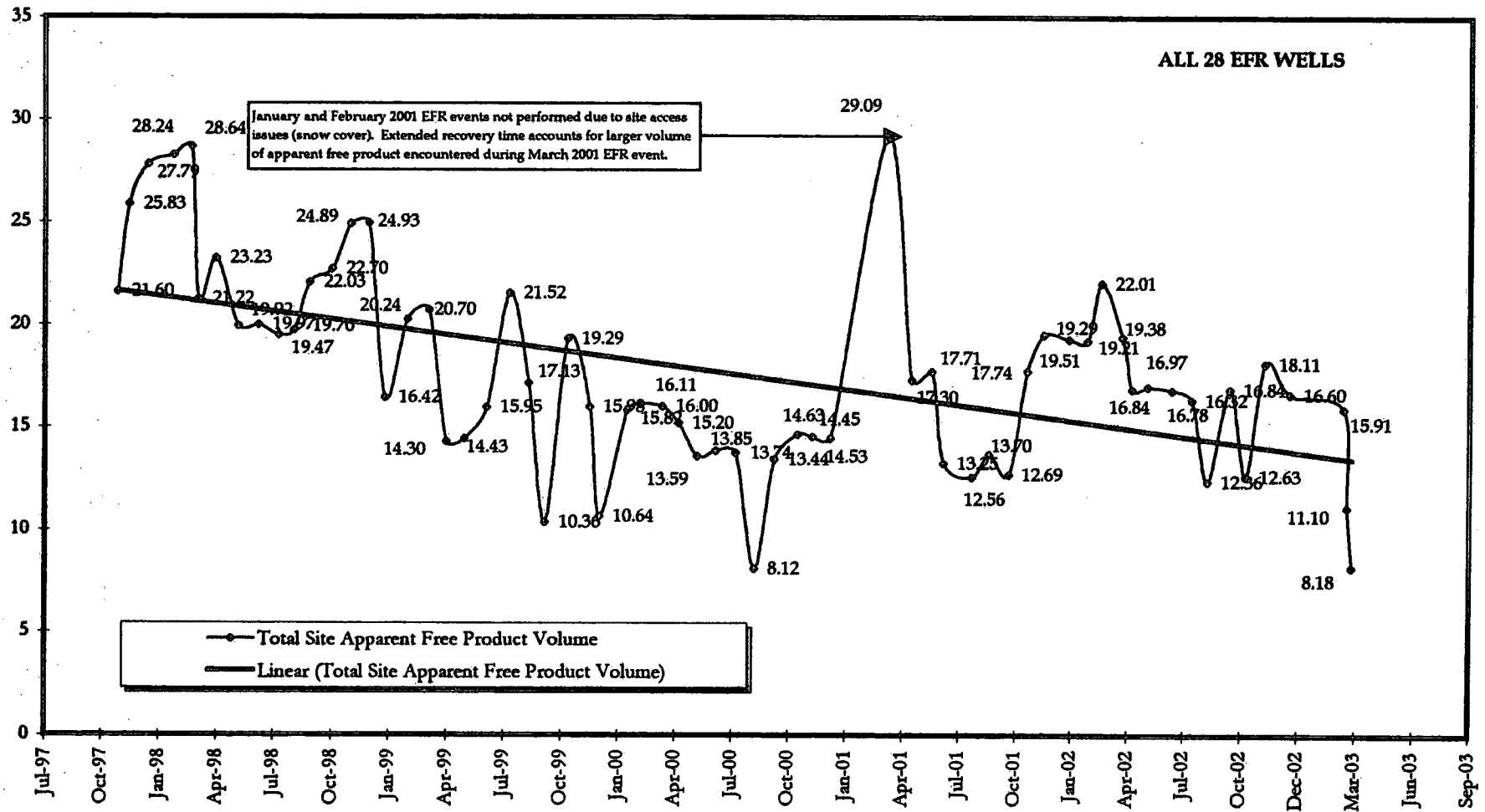


**Apparent Free Product Volume vs. Time
Through 1st Quarter 2003**



L.E. Carpenter and Company Total Site Free Product

**Apparent Free Product Volume vs. Time
Through 1st Quarter 2003**



Appendix C
1st Quarter 2003 Monitoring Well
Sampling Data



PROJECT NAME:	<u>LEC</u>
PROJECT NUMBER:	<u>00-03868.35</u>
LOCATION:	<u>Wharton, NJ</u>
DATES OF FIELD WORK:	<u>3/18/03 - 3/20/03</u>
PURPOSE OF FIELD WORK:	<u>1st Quarter ²⁰⁰³ groundwater sampling</u>
WORK PERFORMED BY:	<u>John Mihalich + Sarah Lapka</u>

Sarah Lapka
Signed

3/21/03
Date

[Signature]
QC'd By

3-31-03
Date



GENERAL NOTES

PROJECT NAME: LEC DATE: 3/18/03
PROJECT NUMBER: 00-03868.35 AUTHOR: JPM/SSL
TIME ARRIVED ON SITE: 7:30 TIME LEFT SITE: 6:00

WEATHER: Temperature: 60 °F Wind: 0 MPH Visibility: good

WORK/SAMPLING PERFORMED: Water level measurements,
Sampled MW21, MW25, MW22

PROBLEMS ENCOUNTERED/CORRECTIVE ACTION TAKEN:

Not able to access Air Products property because
equipment onsite (tanks, towers, etc)
are being demolished and it is not safe
to enter according to Air Products. We should
be able to access property tomorrow.

COMMUNICATIONS:

Name/Representing: Glenn w/ LEC
Subject/Comments: Air Products

QC: 



GENERAL NOTES

PROJECT NAME: LEC DATE: 3/19/03
PROJECT NUMBER: 00-03868.35 AUTHOR: JPM/SSL
TIME ARRIVED ON SITE: 7:00 TIME LEFT SITE: 5:00

WEATHER: 30-40 F° Wind: 0 MPH Visibility: good
Temperature: Wind: MPH Visibility:

WORK/SAMPLING PERFORMED: Sampled MW14I, MW14S, Rinseate 01,
FB01, MW17, MW15I, MW15S. The duplicate + MS/MSD
samples were taken at MW14S.

PROBLEMS ENCOUNTERED/CORRECTIVE ACTION TAKEN:

Note able to access Air Products property because
unsafe conditions due to property demolition
should be able access tomorrow

COMMUNICATIONS:

Name/Representing:

Glenn / w / LEC

Subject/Comments:

Air ProductsQC: 



GENERAL NOTES

PROJECT NAME: LEC DATE: 3/20/03
PROJECT NUMBER: 00-03868.35 AUTHOR: JPM/SSL
TIME ARRIVED ON SITE: 7:30 TIME LEFT SITE: 2:00

WEATHER: Temperature: 30 °F Wind: 0 MPH Visibility: good

WORK/SAMPLING PERFORMED: Sampled SW8, SW5, SW7,
MW11D, MW4

PROBLEMS ENCOUNTERED/CORRECTIVE ACTION TAKEN:

none

COMMUNICATIONS:

Name/Representing: Stewart Brown/Air Products

Subject/Comments: allowed us into site

QC: 

**METER CALIBRATION LOG**

PROJECT NAME: LE Carpenter DATE: 3/18/03
PROJECT NUMBER: 00-03868-35 SAMPLER NAME: Sarah Lapka
MODEL: MP 20 SERIAL NO.: _____ DEVICE OWNER: LEC

pH CALIBRATION

Date / Time	pH 4 Pre-Calibration Reading	pH 4 Post Calibration Reading	pH 7 Pre-Calibration Reading	pH 7 Post Calibration Reading	pH 10 Pre-Calibration Reading	pH 10 Pre-Calibration Reading
3/19/03 13:58	(4.48 / 4.00)	(4.00 / 4.00)	(7.27 / 7.00)	(7.00 / 7.00)	(10.30 / 10.00)	(10.00 / 10.00)
3/20/03 7:53	(3.69 / 4.00)	(4.00 / 4.00)	(5.83 / 7.00)	(7.00 / 7.00)	(11.01 / 10.00)	(10.00 / 10.00)
	(/ 4.00)	(/ 4.00)	(/ 7.00)	(/ 7.00)	(/ 10.00)	(/ 10.00)
	(/ 4.00)	(/ 4.00)	(/ 7.00)	(/ 7.00)	(/ 10.00)	(/ 10.00)
	(/ 4.00)	(/ 4.00)	(/ 7.00)	(/ 7.00)	(/ 10.00)	(/ 10.00)
	(/ 4.00)	(/ 4.00)	(/ 7.00)	(/ 7.00)	(/ 10.00)	(/ 10.00)
	(/ 4.00)	(/ 4.00)	(/ 7.00)	(/ 7.00)	(/ 10.00)	(/ 10.00)
	(/ 4.00)	(/ 4.00)	(/ 7.00)	(/ 7.00)	(/ 10.00)	(/ 10.00)

Buffer Lot Numbers: pH 4: 2760 pH 7: 2973 pH 10: 2961, Solution Source Pine Environmental

CONDUCTIVITY CALIBRATION

Date / Time	Conductivity Solution (units)	Pre-Calibration Reading (units)	Post-Calibration Reading (units)
3/18/03 / 12:22	uS/cm	747	744
3/11/03 7:20	uS/cm	750	778
3/19/03 13:58	uS/cm	997	718
3/20/03 7:56	uS/cm	968	718

Calibration Solution Lot Number: 10718 Calibration Range for Solution 394-1082

Problems/Corrective Actions: pH solution did not arrive until 3/19/03

Sarah Lapka
Signed

3/21/03
Date

[Signature]
Reviewed By

3-31-03
Date

**Turbidity Meter**MODEL: Pocket turbidimeter SERIAL NO.: 0205 0000 4421

Date / Time	Pre-Calibration 1 NTU Reading	Post-Calibration 1 NTU Reading	Pre-Calibration 20.0 NTU Reading	Post-Calibration 20.0 NTU Reading
3/18/03/12:31	1.0	1.2	20.2	20.1
3/19/03 7:24	1.0	1.0	20.5	20.4
3/19/03 14:20	1.2	1.0	19.7	20.0
3/20/03 7:51	1.8	1.0	20.2	20.0

Calibration Solution Lot Number: (1) A2093
(20) A2067Calibration Range for Solution NAProblems/Corrective Actions: _____

_____Jarah Lapka
Signed3/21/03
Date[Signature]
Reviewed By3-31-03
Date



WATER LEVEL DATA

PROJECT NAME: LEC

DATE: 3/18/03

PROJECT NUMBER: 00-03868.35

SAMPLER: SL

Well ID	Time	Top of Casing Elevation	Historical Depth to Water	Depth to Product (feet)	Depth to Water (feet)**	Depth to Bottom (feet)	Water Elev (MSL)
WPC 1	9:38				5.91		
WPC 3	9:42				4.16		
VW12R	9:45				6.73		
WPC 2	9:47				6.82		
WPC 4	9:51				5.19		
MW17S	9:50				7.37		
WPA 3	10:01				8.37		
MW15S	10:06				9.84		
MW15I	10:09				9.75		
MW16I	10:14				7.51		
MW16S	10:17				6.62		
MW20	10:21				8.71		
GE1-2S	10:28				9.95		
GE1-2I	10:30				9.98		
MW19-7	10:33				7.92		
MW19-8	10:38				8.30		
MW19-6	10:44				8.60		
SG R3	10:22				1.16		
SG R2	10:17				1.67		
MW 9-9D	10:45				8.24		
MW19-5	10:46				8.41		
MW19	10:47				8.59		

* Note the Presence of Sheen as an "S"

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e., 1.1 + 0.00 T/PVC.

TYPE OF MEASURING DEVICE: Solinst water level meter
Sarah Lapra

Signed

3/21/03
Date

[Signature] 3-31-03
QC'd By Date



WATER LEVEL DATA

PROJECT NAME: LECDATE: 3/18/03PROJECT NUMBER: 00-03868.35SAMPLER: SL

Well ID	Time	Top of Casing Elevation	Historical Depth to Water	Depth to Product (feet)*	Depth to Water (feet)**	Depth to Bottom (feet)	Water Elev (MSL)
MW19-2	10:50				8.95		
MW19-3	10:52				9.21		
MW19-4	10:54				7.62		
MW19-1	10:57				8.16		
GGR-1	11:03				2.10		
GEI-3	11:04				12.09		
MW185	11:23				4.85		
MW18E	11:24				4.21		
GET-1E	11:26				3.95		
WPB10	11:33				6.15		
MW28	11:35	MW-26	4/11/03		6.79		
MW4	11:39				5.56		
MW9	11:40				4.11		
MW18	11:43				3.85		
EW3	11:46	CW-3	4/11/03		6.62		
WPB6	11:49				4.90		
WPB7	11:50				3.55		
MW14E	11:54				1.98		
MW14S	11:55				2.83		
MW22R	11:57				2.56		
MW25	12:02				1.97		
MW21	12:33				2.80		

* Note the Presence of Sheen as an "S"

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e., 1.1 + 0.00 T/PVC.

TYPE OF MEASURING DEVICE: Solinst water level meterJarah Lapka

Signed

3/21/03

Date

QC'd By

Date



WATER LEVEL DATA

PROJECT NAME: LECDATE: 3-18-03PROJECT NUMBER: 00-03868.35SAMPLER: JPM

Well ID	Time	Top of Casing Elevation	Historical Depth to Water	Depth to Product (feet)*	Depth to Water (feet)**	Depth to Bottom (feet)	Water Elev (MSL)
WPA4	812			8.47	11.26		
WPA5	817			—	10.30		
WPA8	821			10.83	12.21		
WPA7	828			7.95	10.55		
WPB1	834			5.12	5.21		
WPB3	837			—	5.89		
WPB2	840			—	5.52		
WPB4	843			5.99	8.84		
WPB5	849			—	4.61		
RW3	853			—	5.75		
MW-2(R)	856			—	5.90		
RW-2	859			—	5.42		
MW-3	903			6.18	6.72		
MW-6(R)	906			—	4.72		
CW-1	908			—	6.03		
MW-11D(R)	910			—	4.21		
MW-11E(R)	912			—	6.72		
MW-11S	915			6.60	12.05		
WPA9	924			11.88	12.75		
WPA6	929			10.43	13.98		
—	—			—	—		
—	—			—	—		

* Note the Presence of Sheen as an "S"

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e., 1.1 + 0.00 T/PVC.

TYPE OF MEASURING DEVICE: Solinst water level meterSarah Lapka

Signed

3/21/03

Date

QC'd By

Date

3-31-03

PROJECT NAME: LET

DATE: 3-18-03

PROJECT NUMBER: 00-03868.35

SAMPLER: JPM

[illegible]

* All Water Levels Must Include Reference Point and Tape Correction factor, i.e., $1.1 + 0.00 T/PVC$.

TYPE OF MEASURING DEVICE: Solinst water level meter

Sarah Lapka

Signed

3/21/03

Date _____

QC'd By

3-3103

Date _____



WATER SAMPLE LOG

Sheet 11 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/18/03	SAMPLE TIME: 13:50

WELL INFORMATION	WELL ID: MW21	WELL DIAMETER: 4"
WELL MATERIAL: Steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 2.80	TOTAL DEPTH: 15	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: None <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow (use purge form)	
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: well ^a QED portable compressor	
BLADDER TYPE: PE (new / used)		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flow cell	CALIBRATION DATE / TIME: 3/18/03 12:22	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 0.98 UNITS mg/L	FINAL ORP -53 UNITS mV	FINAL TURBIDITY: 3.1
FINAL PH: 6.74	FINAL COND. 833	FINAL TEMP.: 13.49
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Sodium Thiosulfate							
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered	
3	40mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: Courier
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03

LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC WELL NUMBER: MW21
 PROJECT NUMBER: 00-03868.35 WELL DIAMETER: 4"
 DATE: 3/18/03 SAMPLER: JPM/SSL
 Type of pump used: Submersible bladder
 Pumping rate (milliliters/minute): 480
 Water level before purging (nearest 0.01 ft. below reference point) 2.80+ T/
 Depth to bottom of well (obtained from well logs) 15.00+ T/
 Calculated volume of water in casing 7.97
 Weather conditions WARM, 60s, calm, sunny

Time	Purge Rate (ml/min)	pH (SU)	Conductivity (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L) or %	ORP mV	Temp. (°C)	Water Level (0.01 ft.)	Cumulative Purge Volume (gal)
13:05	480	7.21	802	55.1	6.80	-15	16.25	2.80	0.16
13:10		7.12	831	25.3	5.10	-35	14.61	2.81	0.32
13:15		7.15	835	14.2	2.54	-46	14.96	2.81	0.48
13:20		7.15	837	55.7	2.36	-49	15.79	2.81	0.64
13:25		7.03	835	21.6	1.45	-48	14.73	2.81	0.80
13:30		7.01	835	11.5	1.43	-53	13.96	2.82	0.96
13:35		6.91	834	10.7	1.36	-56	13.80	2.82	1.12
13:40		6.76	835	5.0	1.11	-54	13.62	2.82	1.28
13:45		6.75	832	3.4	1.08	-53	13.60	2.82	1.44
13:50	sample	6.74	833	3.1	0.98	-53	13.49	2.82	1.6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$; TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Sarah Lapka
Signed

3/21/03
Date

[Signature]
QC'd By

3-31-03
Date



WATER SAMPLE LOG

Sheet 13 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: John Mihalich	SAMPLER NAME 2: Sarah Lapka	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/18/03	SAMPLE TIME: 15:45

WELL INFORMATION	WELL ID: MW25	WELL DIAMETER: 2
WELL MATERIAL: Steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 1.95	TOTAL DEPTH: 10	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: QED portable compressor	
BLADDER TYPE: PE	(new / used)	
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: HPR20 flow cell	CALIBRATION DATE / TIME: 3/18/03 12:22	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 1.07 UNITS mg/L	FINAL ORP -66 UNITS mV	FINAL TURBIDITY: 191
FINAL PH: 6.85	FINAL COND. 589	FINAL TEMP.: 6.70
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES:						
			A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Na2S2O3						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: Courier
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03



K 16 15 psi
D 10

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LOW-FLOW GROUNDWATER SAMPLING
STABILIZATION LOG

PROJECT NAME: LEC WELL NUMBER: MW25
PROJECT NUMBER: 00-03868.35 WELL DIAMETER: 2
DATE: 3/18/03 SAMPLER: JPM/SSL
Type of pump used: Submersible bladder
Pumping rate (milliliters/minute): 360 mL/min
Water level before purging (nearest 0.01 ft. below reference point) 1.95+ T/
Depth to bottom of well (obtained from well logs) 10.00+ T/
Calculated volume of water in casing 1.31
Weather conditions Warm, 60's, calm, sunny

Time	Purge Rate (ml/min)	pH (SU)	Conductivity (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L) or %	ORP mV	Temp. (°C)	Water Level (0.01 ft.)	Cumulative Purge Volume (gal)
14:50	360	6.99	718	291	2.65	-32	9.81	1.95	0.08
14:55		6.92	717	335	1.32	-60	7.42	1.96	0.16
15:00		6.89	713	312	0.88	-75	7.76	1.97	0.24
15:05		6.88	709	278	0.66	-81	7.03	1.97	0.32
15:10		6.91	700	272	0.53	-87	6.42	1.97	0.40
15:15	6.93	6.81	680	201	0.53	-88	6.89	1.97	0.48
15:25		6.85	606	254	0.96	-67	6.11	2.01	0.56
15:30		6.84	603	262	1.00	-65	6.67	2.01	0.64
15:35		6.84	564	214	1.27	-61	6.82	1.98	0.72
15:40		6.84	578	197	1.10	-61	6.72	1.96	0.80
sample 15:45		6.85	589	191	1.07	-66	6.70	1.99	0.88

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING
LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$; TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Sarah Lapka
Signed

3/21/03
Date

[Signature]
QC'd By

3-31-03
Date



WATER SAMPLE LOG

Sheet 15 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/18/03	SAMPLE TIME: 17:05

WELL INFORMATION	WELL ID: MW22	WELL DIAMETER: 2
WELL MATERIAL: steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 2.55	TOTAL DEPTH: 7.5	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: well wizard compressor	
BLADDER TYPE: PE (new / used)		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flow cell	CALIBRATION DATE / TIME: 3/18/03 12:22	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 0.87 UNITS mg/L	FINAL ORP -76 UNITS mv	FINAL TURBIDITY: 9.5
FINAL PH: 6.88	FINAL COND. 701	FINAL TEMP.: 9.59
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Na2S2O3							
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered	
3	40mL	V OA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
2	amber	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: Courier
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03

JPM

3-31-83
Date



WATER SAMPLE LOG

Sheet 17 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/19/03	SAMPLE TIME: 8:27

WELL INFORMATION	WELL ID: MW145	WELL DIAMETER: 2
WELL MATERIAL: steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 2.00	TOTAL DEPTH: 44.3	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE Well Wizard Compressor	
BLADDER TYPE: PE	(new/used)	
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flow cell	CALIBRATION DATE / TIME 3/19/03 7:20	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 2.10 UNITS mg/L	FINAL ORP -71 UNITS mV	FINAL TURBIDITY: 3.0
FINAL PH: 7.87	FINAL COND. 365	FINAL TEMP.: 10.98
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Na2S2O3							
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered	
3	40mL	V6A	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: courier
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03

JPM

LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC WELL NUMBER: MW145
 PROJECT NUMBER: 00-03868.35 WELL DIAMETER: 2
 DATE: 3/19/03 SAMPLER: JPM/SSL
 Type of pump used: Submersible bladder
 Pumping rate (milliliters/minute): 300 mL/min
 Water level before purging (nearest 0.01 ft. below reference point) 2.00 + TI
 Depth to bottom of well (obtained from well logs) 44.3+ TI
 Calculated volume of water in casing 6.89
 Weather conditions Cold (30s), sunny; calm

Time	Purge Rate (ml/min)	pH (SU)	Conductivity (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L) or %	ORP mV	Temp. (°C)	Water Level (0.01 ft.)	Cumulative Purge Volume (gal)
7:27	300	7.35	359	19.2	6.79	-34	7.47	2.00	0.07
7:32		7.75	359	14.2	2.90	-54	10.59	1.99	0.14
7:37		7.76	361	96.2	2.37	-65	10.78	2.00	0.21
7:42		7.81	365	36.2	2.37	-68	10.90	2.00	0.28
7:47		7.79	366	34.8	2.21	-69	10.84	2.00	0.35
7:52		7.82	365	22.3	2.17	-68	10.84	2.00	0.42
7:57		7.87	365	10.3	2.12	-69	10.96	2.00	0.49
8:02		7.83	365	8.7	2.10	-71	10.99	2.00	0.56
8:07		7.90	365	4.5	2.12	-71	10.84	2.00	0.63
8:12		7.92	365	6.8	2.12	-70	11.07	2.00	0.70
8:17		7.86	365	3.5	2.09	-70	11.10	2.00	0.77
8:22		7.86	366	3.9	2.11	-70	10.96	2.00	0.84
8:27		7.87	365	3.0	2.10	-71	10.98	2.00	0.91

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$; TEMP. (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Sarah Lapka
Signed

3/27/03
Date

[Signature]
QC'd By

3-31-03
Date



WATER SAMPLE LOG

Sheet 19 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/19/03	SAMPLE TIME: 10:42

WELL INFORMATION	WELL ID: MW145	WELL DIAMETER: 4
WELL MATERIAL: Steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 2.80	TOTAL DEPTH: 15.46	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: well wizard compressor	
BLADDER TYPE: PE (new / used)		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flowcell	CALIBRATION DATE / TIME: 3/19/03 7:20	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 0.22 UNITS	FINAL ORP -133 UNITS	FINAL TURBIDITY: 4.7
FINAL PH: 7.04	FINAL COND. 615	FINAL TEMP.: 11.48
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Na2S2O3						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: Commer.
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03



R 45
D 15 15 psi

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LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC WELL NUMBER: 111145
PROJECT NUMBER: 00-03868.35 WELL DIAMETER: 4
DATE: 3/19/03 SAMPLER: JPM/SSL
Type of pump used: Submersible bladder
Pumping rate (milliliters/minute): 400 mL/min
Water level before purging (nearest 0.01 ft. below reference point) 2.80 + T/
Depth to bottom of well (obtained from well logs) 15.46 T/
Calculated volume of water in casing 8.27
Weather conditions cold, 30s, sunny, calm

Time	Purge Rate (ml/min)	pH (SU)	Conductivity (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L) or %	ORP mV	Temp. (°C)	Water Level (0.01 ft.)	Cumulative Purge Volume (gal)
9:22	400	7.12	610	98.7	2.55	-83	11.14	2.80	0.13
9:27		7.09	615	28.5	1.60	-92	11.13	2.80	0.26
9:32		7.07	616	16.1	1.26	-96	10.55	2.80	0.39
9:37		7.10	607	5.9	1.25	-101	10.79	2.80	0.52
9:42		7.11	617	8.5	0.91	-94	11.26	2.81	0.65
9:47		7.08	609	11.3	0.79	-96	11.20	2.81	0.78
9:52		7.09	607	61.8	0.72	-97	10.97	2.82	0.91
9:57		7.07	613	52.5	0.63	-104	11.06	2.83	1.04
10:02		7.09	613	65.6	0.44	-113	11.60	2.80	1.17
10:07		7.10	615	28.2	0.42	-117	11.55	2.79	1.30
10:12		7.07	612	67.2	0.38	-120	11.38	2.81	1.43
10:17		7.13	615	14.8	0.30	-122	11.74	2.81	1.56
10:22		7.11	615	4.7	0.29	-125	11.56	2.81	1.69
10:27		7.09	615	6.7	0.25	-127	11.74	2.80	1.82
10:32		7.09	615	2.5	0.25	-130	11.75	2.81	1.95
10:37		7.09	615	3.9	0.24	-131	11.40	2.81	2.08
10:42		7.04	615	4.7	0.22	-133	11.48	2.81	2.21

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$; TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Signed Sarah Lapka

Date 3/21/03

QC'd By [Signature]

Date 3-31-03

Dupe-01, MS/MSD collected here



WATER SAMPLE LOG

Sheet 21 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/19/03	SAMPLE TIME: 12:15

WELL INFORMATION	WELL ID: MW17	WELL DIAMETER: 4
WELL MATERIAL: Steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 7.22	TOTAL DEPTH: 15.04	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: well wizard compressor	
BLADDER TYPE: PE (new / used)		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flowcell	CALIBRATION DATE / TIME: 3/19/03 7:20	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 10.62 UNITS mg/L	FINAL ORP -4 UNITS mV	FINAL TURBIDITY: 2.7
FINAL PH: 6.69	FINAL COND. 203	FINAL TEMP.:
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Na2S2O3						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: conver
AIRBILL NUMBER: NA SIGNED: Aarah Lapka DATE: 3/21/03

LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC WELL NUMBER: MW17
 PROJECT NUMBER: 00-03868.35 WELL DIAMETER: 4"
 DATE: 3/19/03 SAMPLER: JPM/SSL
 Type of pump used: Submersible bladder
 Pumping rate (milliliters/minute): 360
 Water level before purging (nearest 0.01 ft. below reference point) 7.22 TI
 Depth to bottom of well (obtained from well logs) 15.04 TI
 Calculated volume of water in casing 5.11
 Weather conditions Cold, 30s, Sunny, calm

sample

Time	Purge Rate (ml/min)	pH (SU)	Conductivity (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L) or %	ORP mV	Temp. (°C)	Water Level (0.01 ft.)	Cumulative Purge Volume (gal)
11:55	360	7.46	162	9.8	13.66	-12	4.71	7.22	0.08
12:00		6.83	183	3.6	12.90	-1	2.76	7.24	0.16
12:05		6.65	197	3.2	10.73	2	2.31	7.25	0.24
12:10		6.67	201	2.5	11.17	-2	2.47	7.26	0.32
12:15		6.69	203	2.7	10.82	-4	2.58	7.25	0.40

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$; TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Sarah Lapka
Signed

3/21/03
Date

[Signature]
QC'd By

3-31-03
Date



WATER SAMPLE LOG

Sheet 23 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharfm, NJ	SAMPLE DATE: 3/19/03	SAMPLE TIME: 15:05

WELL INFORMATION	WELL ID: MW15I	WELL DIAMETER: 2
WELL MATERIAL: steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 9.72	TOTAL DEPTH: 43.92	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: Well Wizard compressor	
BLADDER TYPE: PE (new/used)		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flow cell	CALIBRATION DATE/TIME: 3/19/03 13:58	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 0.43 UNITS mg/L	FINAL ORP -113 UNITS mV	FINAL TURBIDITY: 4.6
FINAL PH: 7.09	FINAL COND. 430	FINAL TEMP.: 10.88
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Na2S2O3						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40mL	VOA	E	<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500mL	amber	F	<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: courier
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03

JPM



WATER SAMPLE LOG

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PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03848.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/19/03	SAMPLE TIME: 16:38

WELL INFORMATION	WELL ID: MW155	WELL DIAMETER: 4
WELL MATERIAL: Steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 9.75	TOTAL DEPTH: 25.94	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow (use purge form)	
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: Well Wizard compressor	
BLADDER TYPE: PE (new/used)		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flow cell	CALIBRATION DATE/TIME: 3/19/03 13:58	

SAMPLE DESCRIPTION	COLOR: Clear	ODOR: none
FINAL D.O. 9.31 UNITS mg/L	FINAL ORP -35 UNITS mV	FINAL TURBIDITY: 8.2
FINAL PH: 5.93	FINAL COND. 1033	FINAL TEMP.: 8.32
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - Na2S2O3						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40mL	V6A	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: Commer
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03



R 10 15 psi
D 10

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LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC WELL NUMBER: MLW155
PROJECT NUMBER: 00-03868.35 WELL DIAMETER: 4
DATE: 3/19/03 SAMPLER: JPM/SSL
Type of pump used: Submersible bladder
Pumping rate (milliliters/minute): 450 ml/min
Water level before purging (nearest 0.01 ft. below reference point) 9.75+ T/
Depth to bottom of well (obtained from well logs) 25.94+ T/
Calculated volume of water in casing 10.57
Weather conditions 30s, Sunny, slight breeze

Time	Purge Rate (ml/min)	pH (SU)	Conductivity (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L) or %	ORP mV	Temp. (°C)	Water Level (0.01 ft.)	Cumulative Purge Volume (gal)
15:38	450	6.15	1084	115	12.02	-1	9.06	9.75	0.1
15:43		5.94	1099	51.8	9.56	-13	8.44	9.76	0.2
15:48		5.93	1100	34.0	9.66	-19	8.33	9.75	0.3
15:53		5.94	1106	38.3	9.91	-20	8.32	9.76	0.4
15:58		5.98	1104	25.7	9.83	-21	8.44	9.76	0.5
16:03	5.94	6.1*	1108	23.4	9.43	-23	8.35	9.76	0.6
16:08		5.95	1107	17.0	9.54	-23	8.23	9.76	0.7
16:13		5.95	1084	14.1	9.40	-26	8.18	9.76	0.8
16:18		5.99	1089	12.3	9.44	-26	8.15	9.76	0.9
16:23		5.90	1074	11.0	9.47	-27	8.22	9.76	1.0
16:28		5.94	1063	9.9	9.47	-30	8.38	9.76	1.1
16:33	5.99	6.1*	1056	9.2	9.39	-31	8.38	9.76	1.2
16:38		5.93	1033	8.2	9.31	-35	8.32	9.76	1.3

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$; TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Shirah Lapka
Signed

3/21/03
Date

[Signature]
QC'd By

3-31-03
Date



WATER SAMPLE LOG

Sheet 27 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/20/03	SAMPLE TIME: 8:02

WELL INFORMATION	WELL ID: SW8	WELL DIAMETER: NA
WELL MATERIAL: NA	WELL CONDITIONS: NA	
STATIC WATER LEVEL: NA	TOTAL DEPTH: NA	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: <u>None</u> <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: <u>grab sample</u> (use purge form)	
SAMPLING PUMP: NA	PNEUMATIC SOURCE: NA	
BLADDER TYPE: NA (new / used)		
TUBING TYPE: NA	TUBING CONDITION: NA	HOW STORED: NA
WATER QUALITY METER TYPE: MP20 flowcell	CALIBRATION DATE / TIME: 3/20/03 7:56	

SAMPLE DESCRIPTION	COLOR: <u>clear</u>	ODOR: <u>none</u>
FINAL D.O. 9.61 UNITS mg/L	FINAL ORP -48 UNITS mV	FINAL TURBIDITY: 11.2
FINAL PH: 8.14	FINAL COND. 1420	FINAL TEMP.: 5.33
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - <u>Na2S2O3</u>						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40 mL	VDA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500 mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: Courier
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03

JPM

LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC

WELL NUMBER: 5108 65

PROJECT NUMBER: 00-03868.35

WELL DIAMETER: 1

DATE: 3/20/03

SAMPLER: JPM/SSL

Type of pump used: Submersible grab sample

Pumping rate (milliliters/minute): 1

Water level before purging (nearest 0.01 ft. below reference point) — + T/

Depth to bottom of well (obtained from well logs) + T/

Calculated volume of water in casing

Weather conditions rainy, 40s, slight wind

[illegible]

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$, TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Sarah Lapka
Signed

3/21/03
Date

QC'd By [Signature] Date 3-31-03



WATER SAMPLE LOG

Sheet 29 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/20/03	SAMPLE TIME: 8:23

WELL INFORMATION	WELL ID: SWS	WELL DIAMETER: NA
WELL MATERIAL: NA	WELL CONDITIONS: NA	
STATIC WATER LEVEL: NA	TOTAL DEPTH: NA	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: <u>none</u> <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: <u>grab sample</u> (use purge form)	
SAMPLING PUMP: NA	PNEUMATIC SOURCE	
BLADDER TYPE: NA (new / used)		
TUBING TYPE: NA	TUBING CONDITION: NA	HOW STORED: NA
WATER QUALITY METER TYPE: MP20 flow cell		CALIBRATION DATE / TIME: 3/20/03 7:56

SAMPLE DESCRIPTION	COLOR: <u>clear</u>	ODOR: <u>none</u>
FINAL D.O. 13.04 UNITS mg/L	FINAL ORP -54 UNITS mV	FINAL TURBIDITY: 13.7
FINAL PH: 7.66	FINAL COND. 1136	FINAL TEMP.: 3.61
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES:						
			A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - <u>Na2S2O3</u>						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40 mL	VOA	E	<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500 mL	amber	F	<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: courier
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/24/03

JPM

LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC

WELL NUMBER: SNS (11)

PROJECT NUMBER: 00-03868.35

WELL DIAMETER: —

DATE: 3/20/03

SAMPLER: JPM/SSL

Type of pump used: NA, grab sample

Pumping rate (milliliters/minute): NA

Water level before purging (nearest 0.01 ft. below reference point) NA + T/

Depth to bottom of well (obtained from well logs) NA + T/

Calculated volume of water in casing NA


Weather conditions cold, rainy, slight wind

[illegible]

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$, TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Sarah Lapka
Signed

3/21/03
Date

QC'd By 

3-31-03
Date



WATER SAMPLE LOG

Sheet 31 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/20/03	SAMPLE TIME: 8:35

WELL INFORMATION	WELL ID: SW7	WELL DIAMETER: N/A
WELL MATERIAL: N/A	WELL CONDITIONS: N/A	
STATIC WATER LEVEL: N/A	TOTAL DEPTH: N/A	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: <u>none</u> <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: <u>grab sample</u> (use purge form)	
SAMPLING PUMP: N/A	PNEUMATIC SOURCE	
BLADDER TYPE: N/A (new / used)		
TUBING TYPE: N/A	TUBING CONDITION: N/A	HOW STORED: N/A
WATER QUALITY METER TYPE: <u>MP20 flow cell</u> CALIBRATION DATE / TIME <u>3/20/03 7:56</u>		

SAMPLE DESCRIPTION	COLOR: <u>clear</u>	ODOR: <u>none</u>
FINAL D.O. <u>7.08</u> UNITS <u>mg/L</u>	FINAL ORP <u>-68</u> UNITS <u>mV</u>	FINAL TURBIDITY: <u>15.3</u>
FINAL PH: <u>7.42</u>	FINAL COND. <u>1530</u>	FINAL TEMP.: <u>5.04</u>
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: <u>N/A</u>
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - <u>NH2S2O3</u>							
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered	
3	40mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

CHAIN-OF-CUSTODY NUMBER: N4 DATE SHIPPED: 3/20/03 METHOD: lower
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03

PROJECT NAME: LEC WELL NUMBER: SW7 (upgradient closest to exit)

PROJECT NUMBER: 00-03868.35 WELL DIAMETER: NA

DATE: 3/20/03 SAMPLER: JPM/SSL

Type of pump used: NA, grab sample

Pumping rate (milliliters/minute): NA

Water level before purging (nearest 0.01 ft. below reference point) NA + T/

Depth to bottom of well (obtained from well logs) NA + T/

Calculated volume of water in casing NA

Weather conditions Cold, raining, 40s

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$, TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

3-31-03
Date



WATER SAMPLE LOG

Sheet 33 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/20/03	SAMPLE TIME: 9:20

WELL INFORMATION	WELL ID: MW11D	WELL DIAMETER: 2
WELL MATERIAL: Steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 4.00	TOTAL DEPTH: 157	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: none <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE well wizard compressor	
BLADDER TYPE: PE (new) used		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: fresh bag
WATER QUALITY METER TYPE: MP20 flow cell	CALIBRATION DATE / TIME 3/20/03 7:56	

SAMPLE DESCRIPTION	COLOR: clear	ODOR: none
FINAL D.O. 6.56 UNITS mg/L	FINAL ORP -58 UNITS mV	FINAL TURBIDITY: 4.1
FINAL PH: 8.24	FINAL COND. 207	FINAL TEMP.: 7.01
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES: A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - <u>NH2S2O3</u>						
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered
3	40mL	VOA	E	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
2	500mL	amber	F	<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: Conner
AIRBILL NUMBER: NA SIGNED: Samuel Lapka DATE: 3/21/03

3-31-03
Date



WATER SAMPLE LOG

Sheet 35 of 38

PROJECT INFORMATION	PROJECT NAME: L.E. Carpenter	EVENT NAME: 1st Quarter, 2003 Sampling
SAMPLER NAME 1: JPM	SAMPLER NAME 2: SSL	PROJECT NO: 00-03868.35
SITE LOCATION: Wharton, NJ	SAMPLE DATE: 3/20/03	SAMPLE TIME: 10:25

WELL INFORMATION	WELL ID: MW4	WELL DIAMETER: 2
WELL MATERIAL: Steel	WELL CONDITIONS: good	
STATIC WATER LEVEL: 5.55	TOTAL DEPTH: 27	
FREE PRODUCT: <input type="checkbox"/> SHEEN <input type="checkbox"/> MEAS. THICKNESS: <u>none</u> <input type="checkbox"/> EQUIP. COATING <input type="checkbox"/> PURGE WATER		

SAMPLE METHOD	PURGE METHOD: low flow	(use purge form)
SAMPLING PUMP: QED submersible pump	PNEUMATIC SOURCE: well wizard compressor	
BLADDER TYPE: PE (new / used)		
TUBING TYPE: PE	TUBING CONDITION: good	HOW STORED: in well
WATER QUALITY METER TYPE: MP20 flow cell	CALIBRATION DATE / TIME: 3/20/03 7:56	

SAMPLE DESCRIPTION	COLOR: Clear	ODOR: none
FINAL D.O. 1.77 UNITS mg/L	FINAL ORP -103 UNITS mV	FINAL TURBIDITY: 12.7
FINAL PH: 6.73	FINAL COND. 404	FINAL TEMP.: 1.89
COMMENTS:		

SAMPLE FILTRATION	FILTER TYPE / SIZE / DESCRIPTION: NA
FILTER METALS SAMPLE ONLY	COLOR AFTER FILTRATION:

BOTTLES FILLED			PRESERVATIVE CODES:							
			A - None B - HNO3 C - H2SO4 D - NaOH E - HCL F - <u>Na2S2O3</u>							
Number	Size	Type	Preservative	Filtered	Number	Size	Type	Preservative	Filtered	
3	40mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
2	500mL	amber	F	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
				<input type="checkbox"/> Y <input type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

CHAIN-OF-CUSTODY NUMBER: NA DATE SHIPPED: 3/20/03 METHOD: corner
AIRBILL NUMBER: NA SIGNED: Sarah Lapka DATE: 3/21/03

LOW-FLOW GROUNDWATER SAMPLING STABILIZATION LOG

PROJECT NAME: LEC

WELL NUMBER: MW4

PROJECT NUMBER: 00-03868.35

WELL DIAMETER: 2

DATE: 3/20/03

SAMPLER: JPM/SSL

Type of pump used: Submersible bladder

Pumping rate (milliliters/minute): 450

Water level before purging (nearest 0.01 ft. below reference point) 5.55+ T/

Depth to bottom of well (obtained from well logs) 27 + T/

Calculated volume of water in casing 3.50

Weather conditions light rain; cold (30s); calm

[illegible]

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS: pH - ± 0.1 pH; COND. - $\pm 5\%$, TEMP (CORRECTED); TEMP. - $\pm 0.5^\circ\text{C}$; TURBIDITY $\pm 10\%$

Sarah Lapka
Signed

3/2/03
Date

QC'd By [Signature]

3-31-07
Date

37/38

Analysis Request / Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # _____ Group# _____ Sample # _____

COC # 0017652

Please print. Instructions on reverse side correspond with circled numbers.

1 Client: <u>MT, Inc</u> Acct. #: _____ Project Name#: <u>MT, Inc LFC</u> PWSID #: _____ Project Manager: <u>Nick Cleverly</u> P.O.#: _____ Sampler: <u>JPM/SL</u> Quote #: _____ Name of state where samples were collected: <u>NJ</u>				Matrix Check if Potable <input type="checkbox"/> NPDES Applicable <input type="checkbox"/>		5 Analyses Requested										For Lab Use Only FSC: _____ SCR #: _____		
2 Sample Identification				3 Composite		4 Total # of Containers		6 Temperature of samples upon receipt (if requested)										
Date Collected		Time Collected		Grab	Composite	Soil	Water	Other	Remarks									
MW 21		11/18/03 13:50		✓			✓		5	✓	✓							
MW 25		15:45		✓			✓		5	✓	✓							
MW 22		17:05		✓			✓		5	✓	✓							
MW 14 I		3/19/03 8:27		✓			✓		5	✓	✓							
MW 14 S		10:42		✓			✓		5	✓	✓							
MW 14 S MS/MSD		10:42		✓			✓		5	✓	✓							
Trip Blank				✓			✓		3	✓	✓							
Dupe 01				✓			✓		5	✓	✓							
FBD1		3/19/03 9:10		✓			✓		5	✓	✓							
Rinsatec 01		3/19/03 9:05		✓			✓		5	✓	✓							

7 Turnaround Time Requested (TAT) (please circle): (Normal) Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____ E-mail address: _____				Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____ Relinquished by: _____ Date _____ Time _____		Received by: <u>Jay Charles</u> Date <u>3/24/03</u> Time <u>12:25</u> Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____	
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

8 Data Package Options (please circle if required) QC Summary Type VI (Raw Data) Yes No Type I (Tier I) GLP Site-specific QC required? Yes No Type II (Tier II) Other (If yes, indicate QC sample and submit triplicate volume.) Type III (NJ Red. Del.) Internal Chain of Custody required? Yes No Type IV (CLP)		SDG Complete? Yes No	
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	----------------------	--

38/38

Analysis Request / Environmental Services Chain of Custody



For Lancaster Laboratories use only

Acct. # _____ Group# _____ Sample# _____

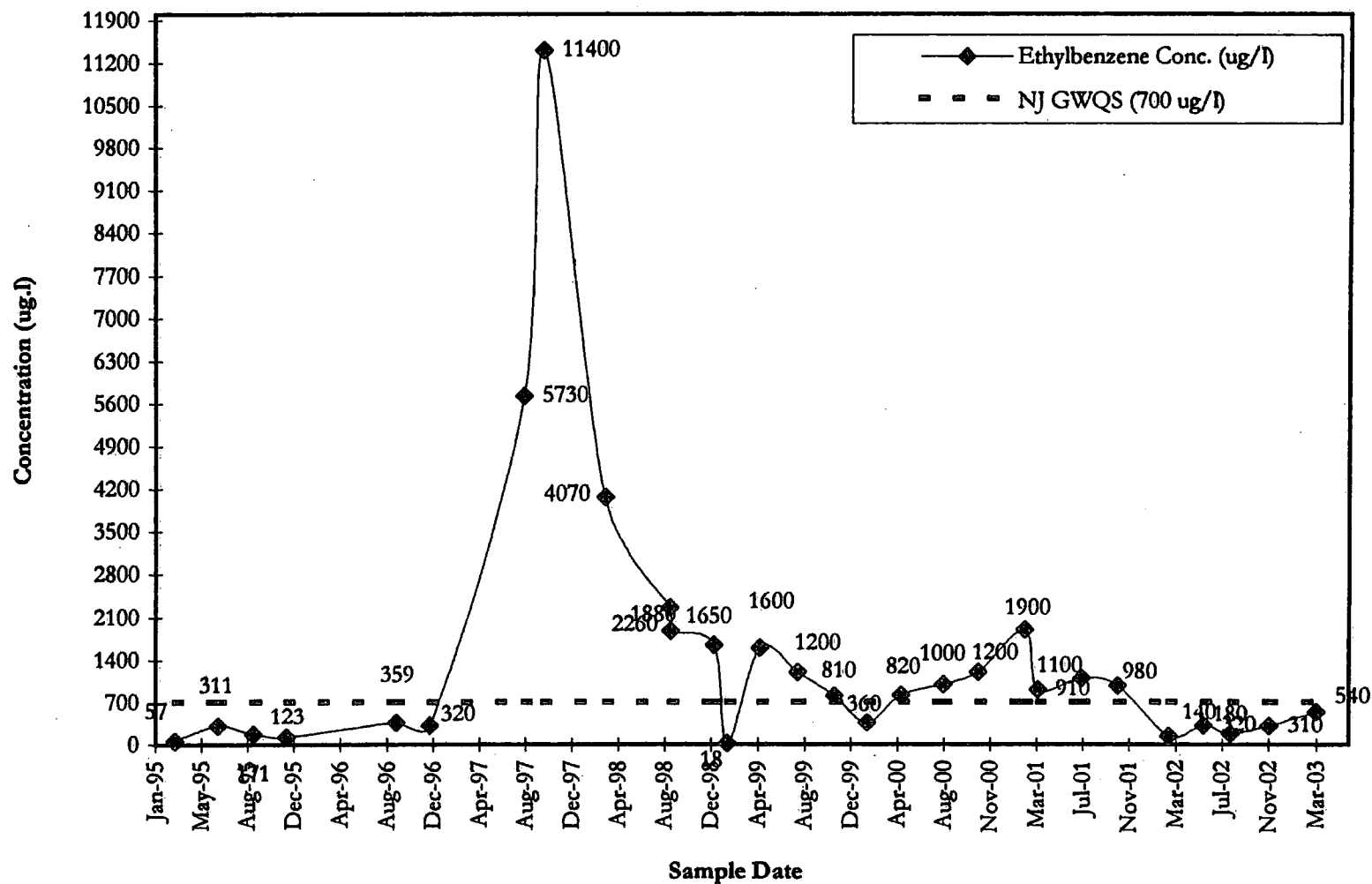
COC # 0017651

Please print. Instructions on reverse side correspond with circled numbers.

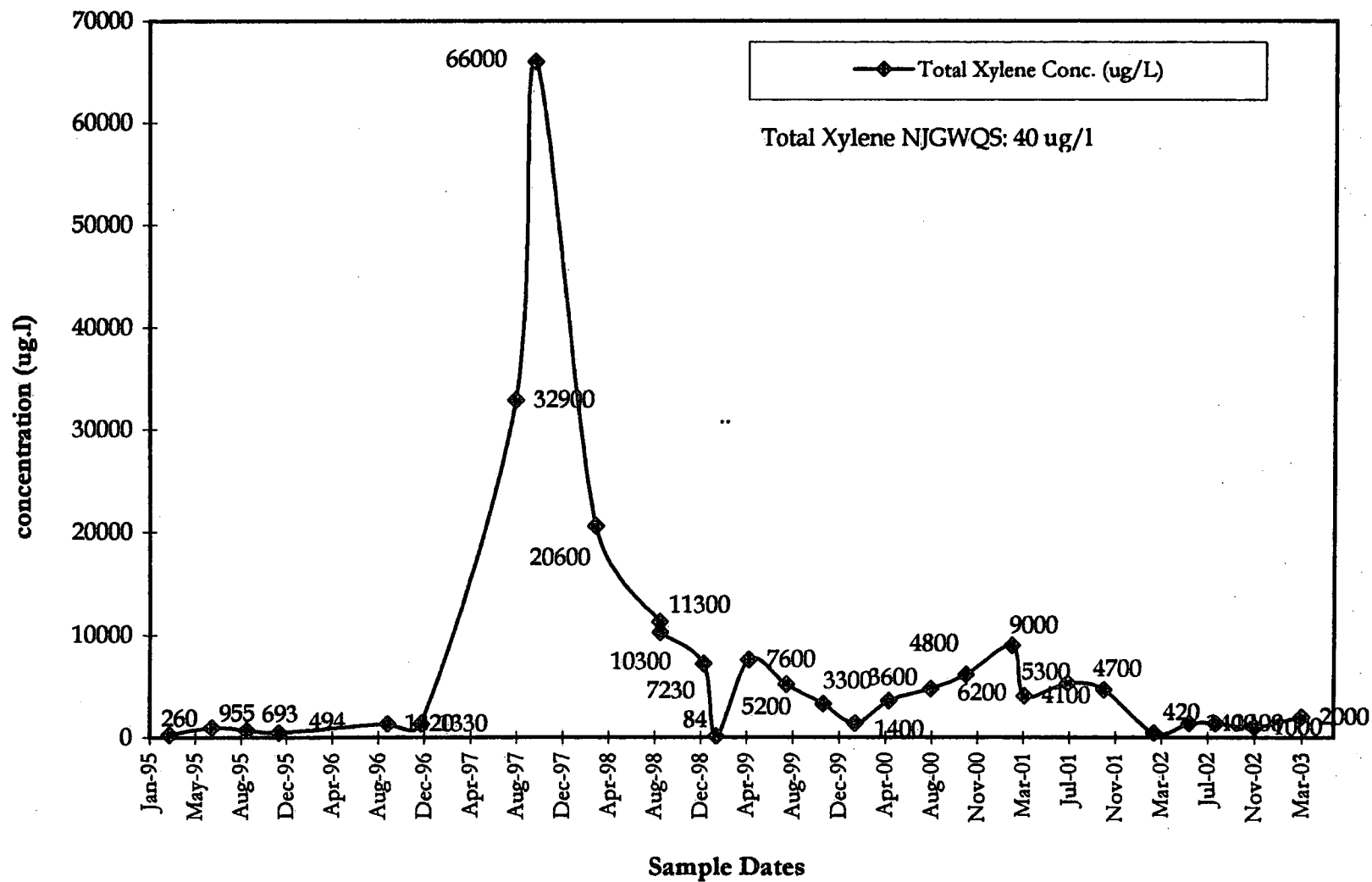
1 Client: <u>KMT, Inc</u> Acct. #: _____		Matrix		4		5		Analyses Requested		For Lab Use Only	
Project Name/#: <u>LEC</u> PWSID #: _____		Check if Applicable								FSC: _____	
Project Manager: <u>Nick Clevett</u> P.O.#: _____		<input type="checkbox"/> Potable <input type="checkbox"/> NPDES								SCR #: _____	
Sampler: <u>JPM/SSL</u> Quote #: _____		<input type="checkbox"/> Water <input type="checkbox"/> Other									
Name of state where samples were collected: <u>NJ</u>											
2		3								6	
Sample Identification		Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	Remarks	
MW17	3/19/03	12:15	✓			✓			5	✓	
MW15#	3/19/03	15:05	✓			✓			5	✓	
MW15S	3/19/03	16:38	✓			✓			5	✓	
SW8	3/20/03	8:02	✓			✓			5	✓	
SW5		8:23	✓			✓			5	✓	
SW7		8:35	✓			✓			5	✓	
MW11D		9:20	✓			✓			2	✓	
MW4		10:25	✓			✓			5	✓	
7 Turnaround Time Requested (TAT) (please circle) <u>Normal</u> Rush (Rush TAT is subject to Lancaster Laboratories approval and surcharge.) Date results are needed: _____ Rush results requested by (please circle): Phone Fax E-mail Phone #: _____ Fax #: _____ E-mail address: _____		Relinquished by: _____ Date _____ Time _____ Received by: <u>Jay D. Carter</u> 3/19/03 Date _____ Time _____		Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____		Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____		Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____		Relinquished by: _____ Date _____ Time _____ Received by: _____ Date _____ Time _____	
8 Data Package Options (please circle if required) QC Summary Type VI (Raw Data) Yes No Type I (Tier I) GLP Site-specific QC required? Yes No Type II (Tier II) Other (If yes, indicate QC sample and submit triplicate volume.) Type III (NJ Red. Del.) Internal Chain of Custody required? Yes No Type IV (CLP)											

Appendix D
Groundwater Concentration Trend
Analysis

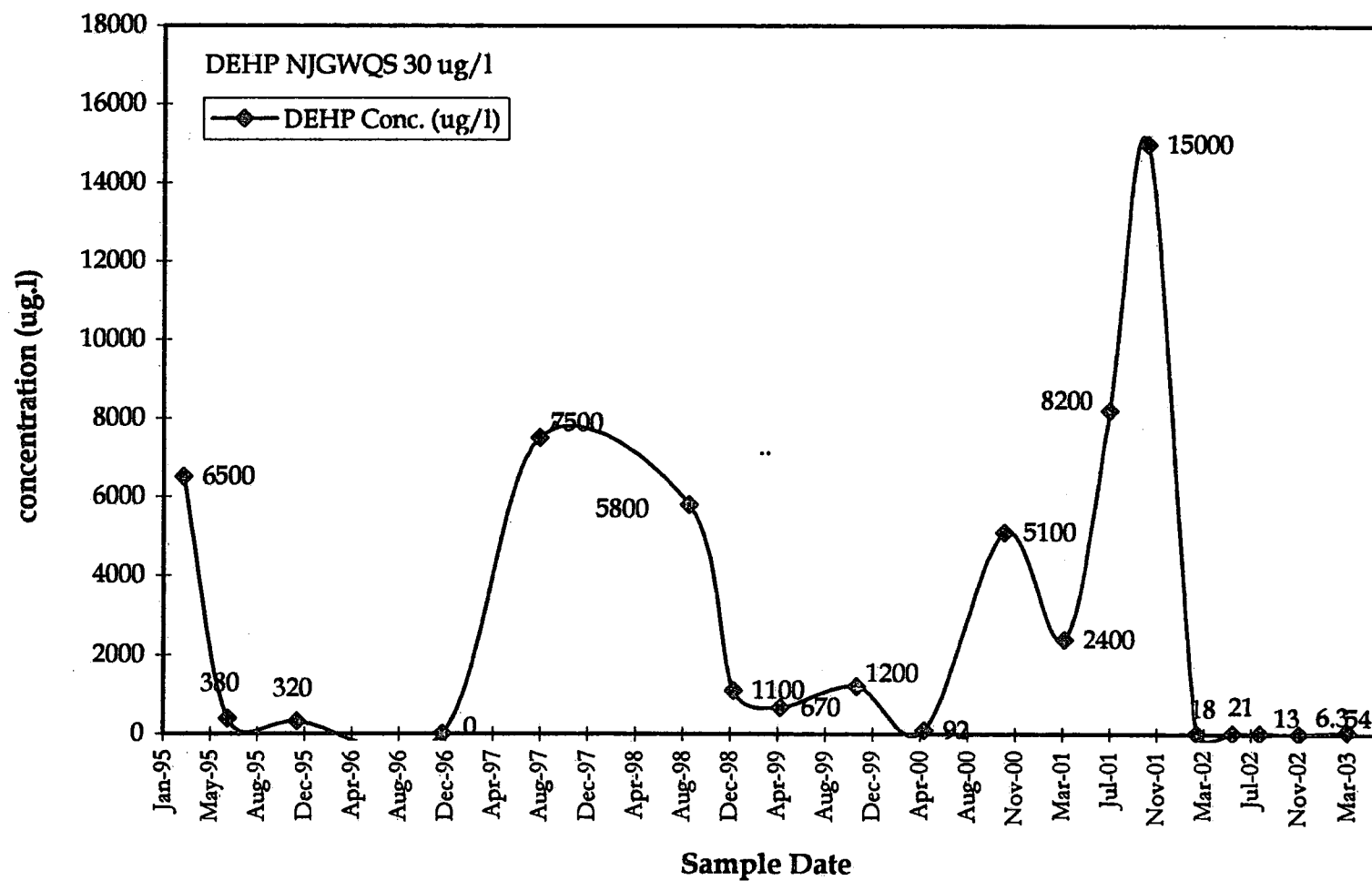
MW-22R Ethylbenzene Concentraion Trend



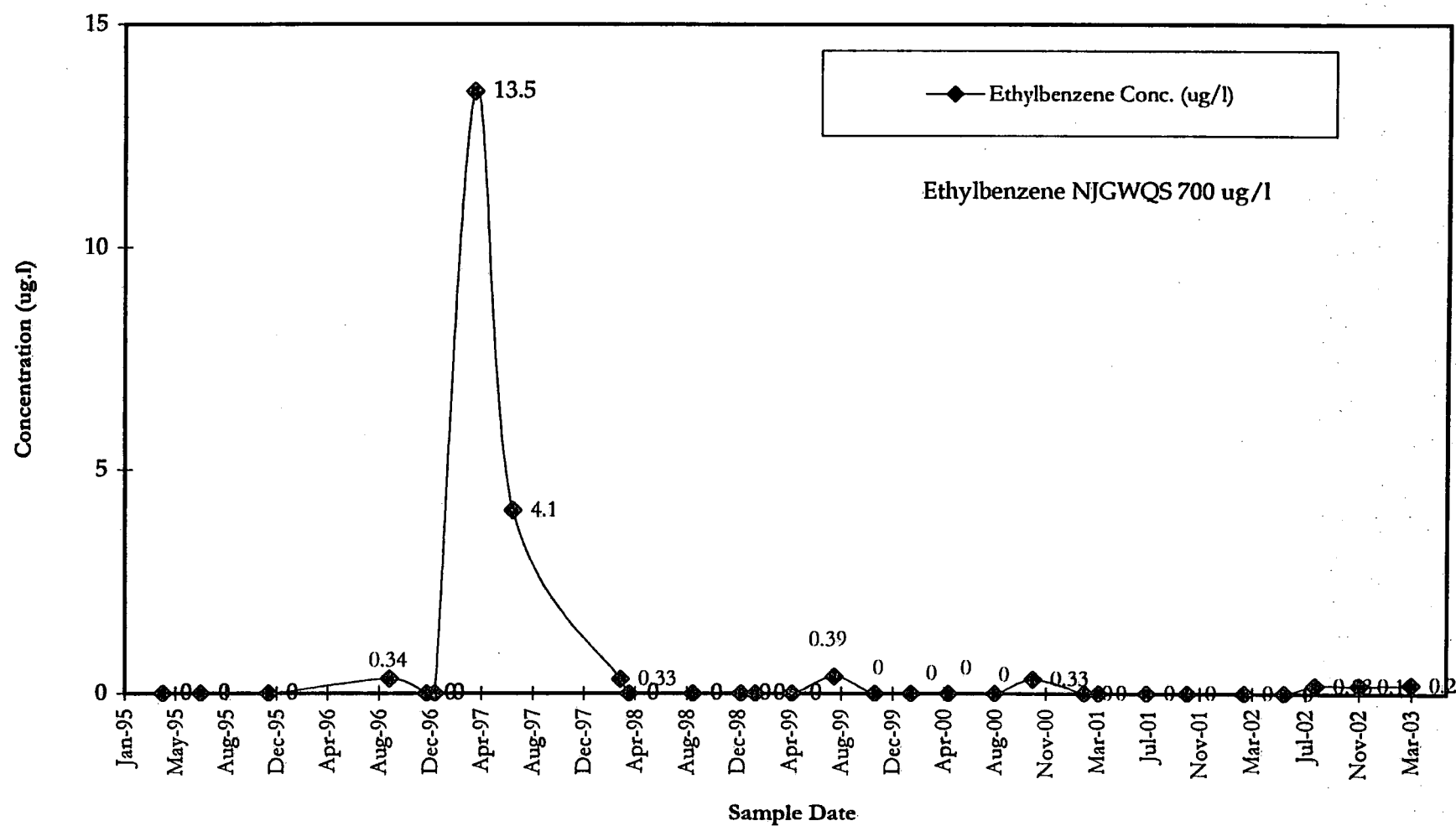
MW-22R Total Xylene Concentration Trend



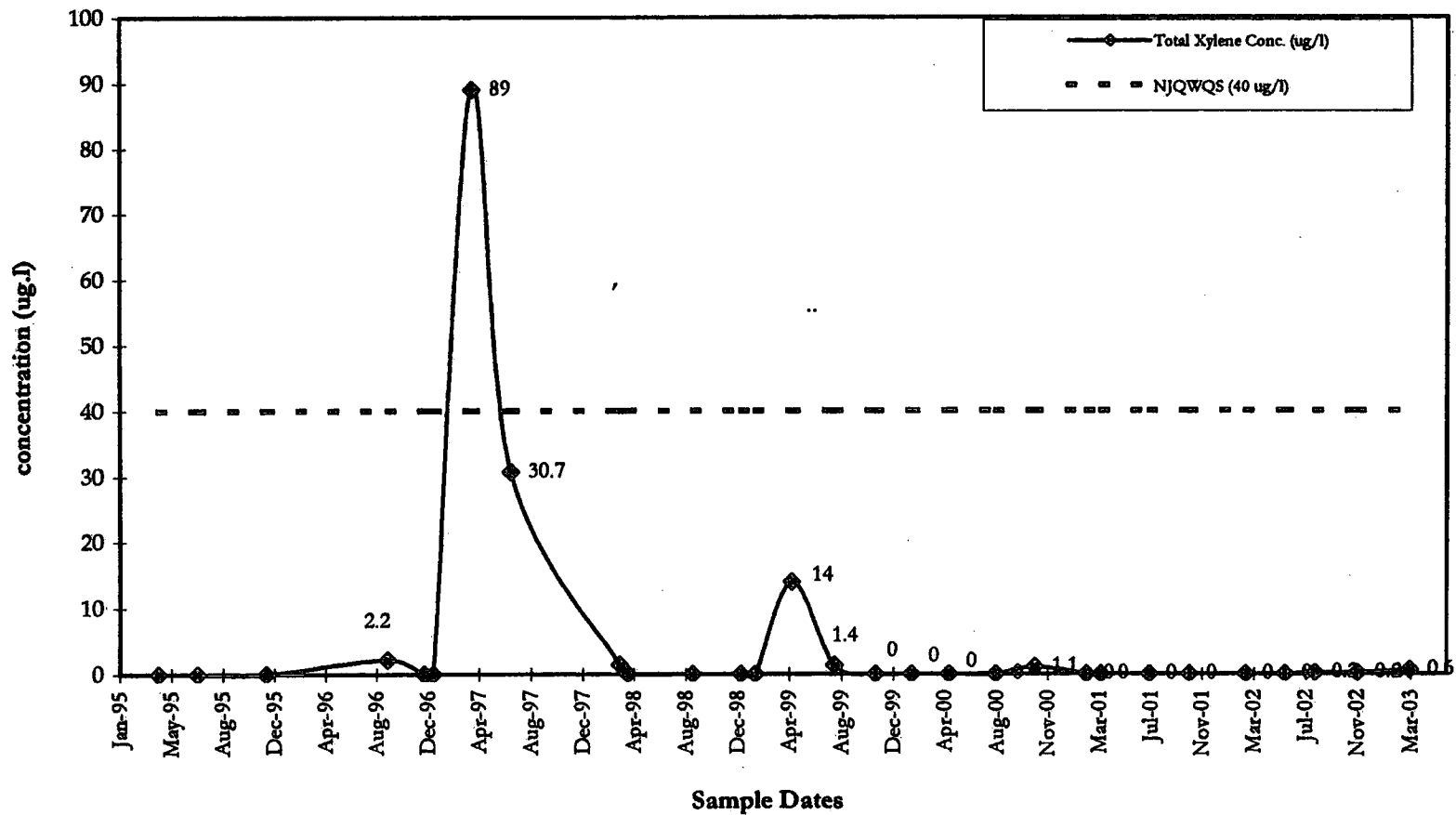
MW-22R DEHP Concentration Trend



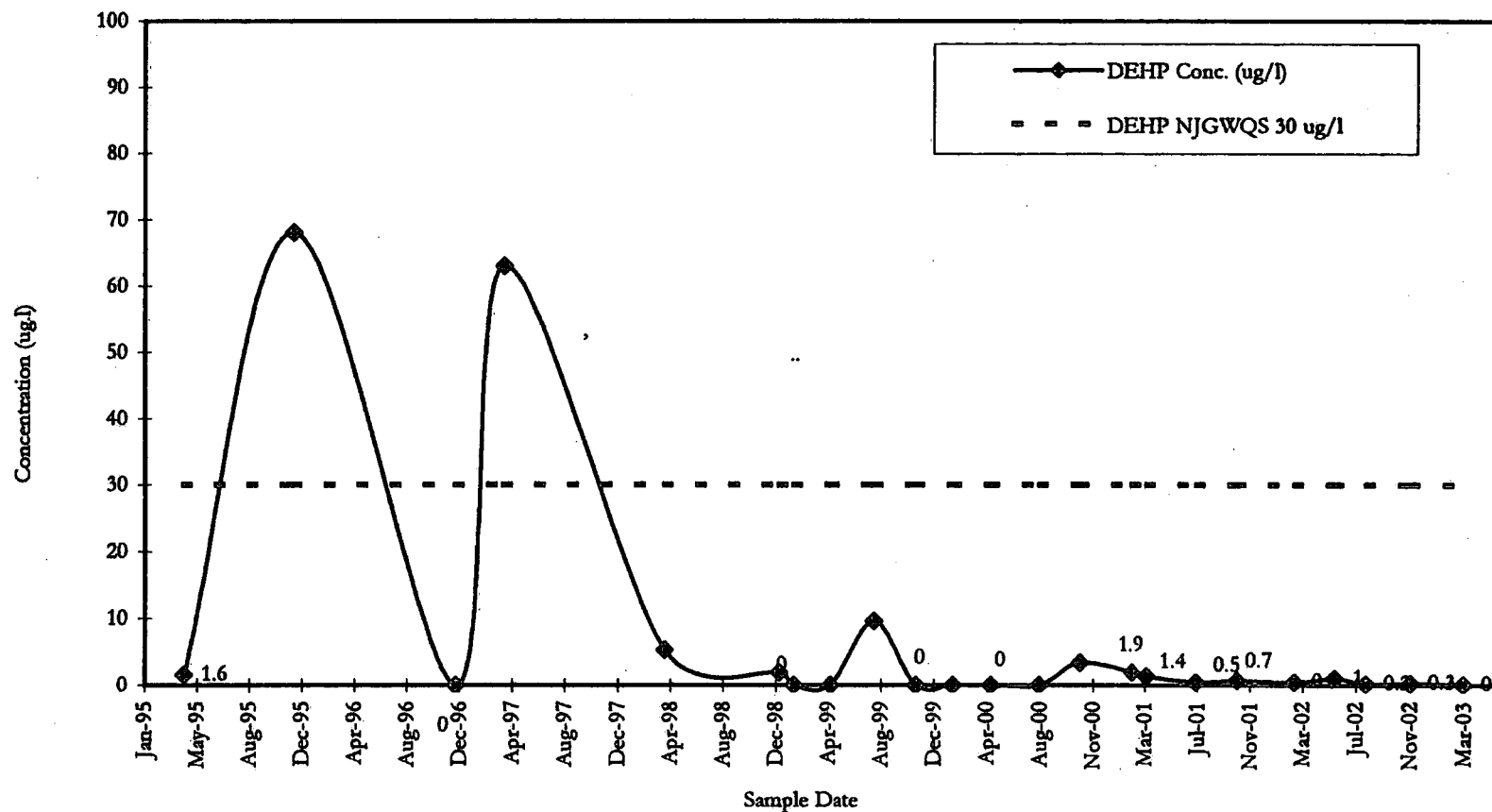
MW-25R Ethylbenzene Concentration Trend



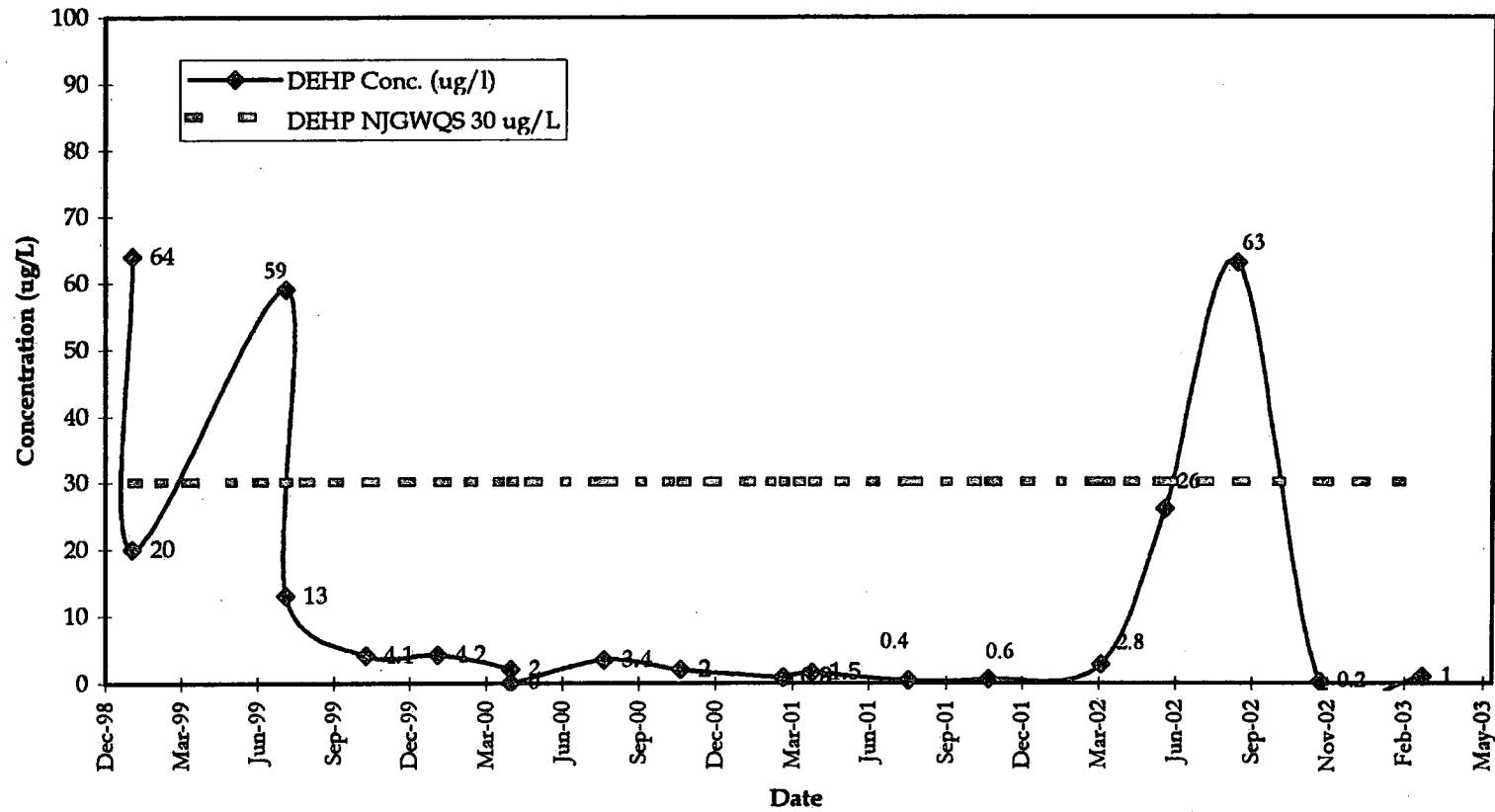
MW-25R Total Xylene Concentration Trend



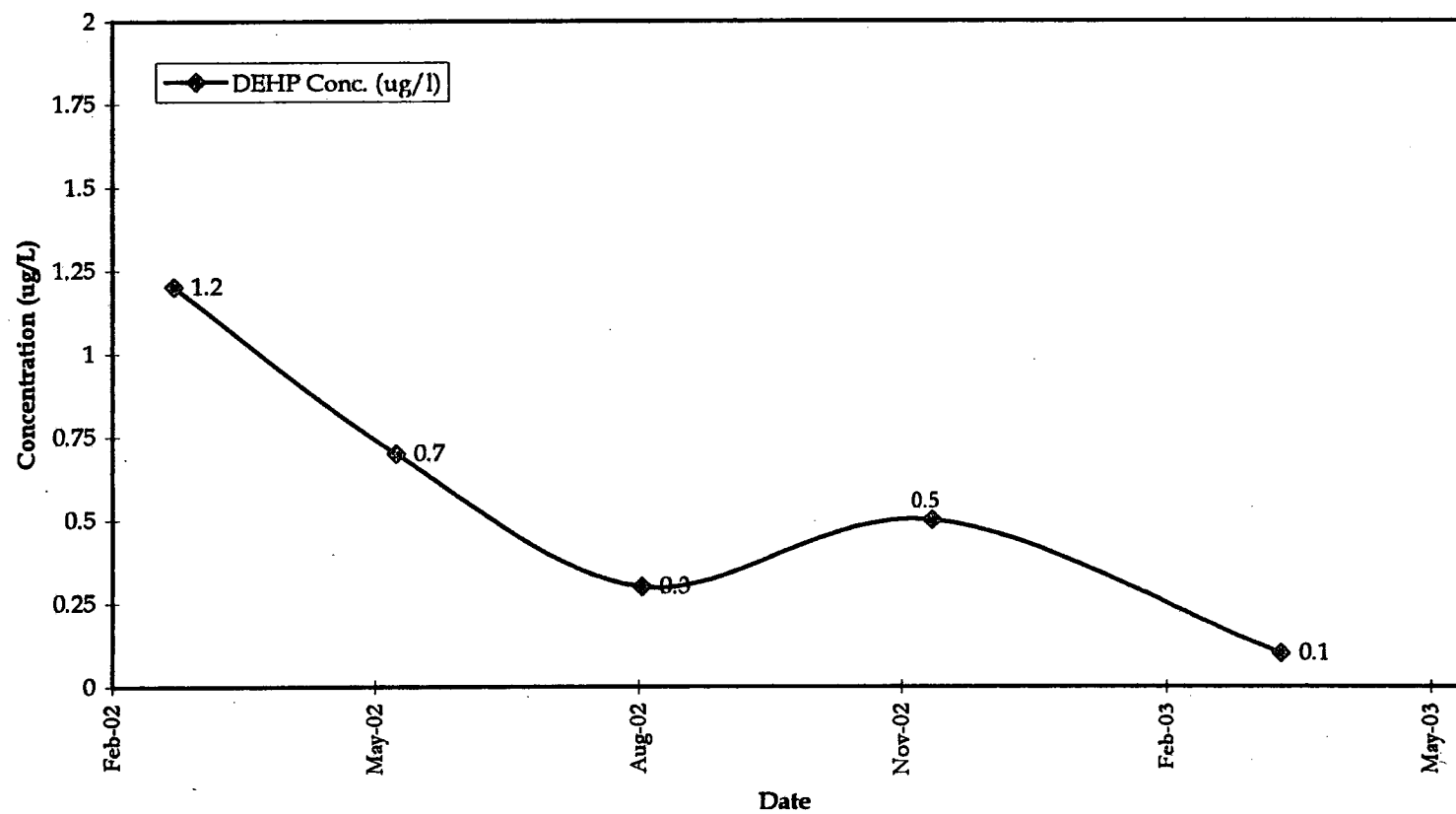
MW-25R DEHP Concentration Trend



MW-11DR DEHP Concentration Trend



MW-14S DEHP Concentration Trend



Appendix E
1st Quarter 2003 Laboratory Analytical
Report



Analysis Report

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Lancaster Laboratories Sample No. WW 4015816

Collected: 03/18/2003 13:50 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:51

PO Box 8923

Discard: 04/05/2003

MW21 Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

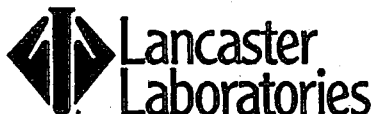
M21-- SDG#: LEC01-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 07:20	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 13:46	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015817

Collected: 03/18/2003 15:45 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05
Reported: 03/28/2003 at 15:51
Discard: 04/05/2003
MW25 Grab Water Sample

RMT, Inc.
PO Box 8923
Madison WI 53708-8923

L. E. Carpenter

M25-- SDG#: LEC01-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method Detection Limit		
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 07:50	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 14:46	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015818

Collected: 03/18/2003 17:05 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:51

PO Box 8923

Discard: 04/05/2003

MW22 Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

M22-- SDG#: LEC01-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method	Units	Dilution Factor
				Detection Limit		
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	2,000.	3.0	ug/l	5
07029	Benzene	71-43-2	N.D.	1.0	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	540.	1.0	ug/l	5
Due to the presence of an interferent near its retention time, the normal reporting limit was not attained for benzene. The presence or concentration of this compound cannot be determined due to the presence of this interferent.						
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	54.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 08:20	Stephanie A Selis	1
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 21:37	Stephanie A Selis	5
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 15:46	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015819

Collected: 03/19/2003 08:27 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05
Reported: 03/28/2003 at 15:51
Discard: 04/05/2003
MW14I Grab Water Sample

RMT, Inc.
PO Box 8923

Madison WI 53708-8923

L. E. Carpenter

M14I- SDG#: LEC01-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 21:07	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 16:46	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015820

Collected: 03/19/2003 10:42 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:51

PO Box 8923

Discard: 04/05/2003

MW14S Unspiked Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

M14S- SDG#: LEC01-05BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method		Units	Dilution Factor
				Detection Limit			
08238	BTEX (EPA 602)						
05538	Total Xylenes	1330-20-7	N.D.	0.60		ug/l	1
07029	Benzene	71-43-2	N.D.	0.20		ug/l	1
07030	Toluene	108-88-3	N.D.	0.20		ug/l	1
07031	Ethylbenzene	100-41-4	0.21 J	0.20		ug/l	1
00554	Base Neutrals (cont)						
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.		ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 09:51	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 10:47	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015821

Collected: 03/19/2003 10:42 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:51

PO Box 8923

Discard: 04/05/2003

MW14S Matrix Spike Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

M14S- SDG#: LEC01-05MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	62.	0.60	ug/l	1
07029	Benzene	71-43-2	21.	0.20	ug/l	1
07030	Toluene	108-88-3	21.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	20.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	98.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 10:21	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 11:47	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015822

Collected: 03/19/2003 10:42 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:52

PO Box 8923

Discard: 04/05/2003

MW14S Matrix Spike Dup/Dup Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

M14S- SDG#: LEC01-05MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method Detection Limit		
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	59.	0.60	ug/l	1
07029	Benzene	71-43-2	20.	0.20	ug/l	1
07030	Toluene	108-88-3	20.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	19.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	100.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 10:51	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 12:47	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015823

Collected: 03/19/2003 00:00 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05
Reported: 03/28/2003 at 15:52
Discard: 04/05/2003
Trip_Blank Water Sample

RMT, Inc.
PO Box 8923
Madison WI 53708-8923

L. E. Carpenter

TBLEC SDG#: LEC01-06TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 05:50	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 17:45	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Lancaster Laboratories Sample No. WW 4015824

Collected: n.a.

by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:52

PO Box 8923

Discard: 04/05/2003

DUPE01 Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

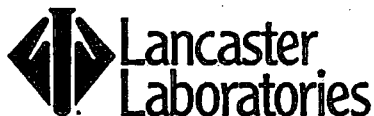
DPLEC SDG#: LEC01-07FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	0.22 J	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	4. J	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 13:34	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 18:45	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Lancaster Laboratories Sample No. WW 4015825

Collected: 03/19/2003 09:10 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05
Reported: 03/28/2003 at 15:52
Discard: 04/05/2003
FB01 Grab Water Sample

RMT, Inc.
PO Box 8923
Madison WI 53708-8923

L. E. Carpenter

FBLEC SDG#: LEC01-08FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 06:20	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 19:45	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015826

Collected: 03/19/2003 09:05 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:52

PO Box 8923

Discard: 04/05/2003

Rinsate01 Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

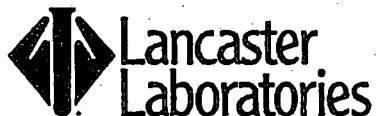
RBLEC SDG#: LEC01-09RB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 06:50	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 20:45	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015827

Collected: 03/19/2003 12:15 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05
Reported: 03/28/2003 at 15:52
Discard: 04/05/2003
MW17 Grab Water Sample

RMT, Inc.
PO Box 8923

Madison WI 53708-8923

L. E. Carpenter

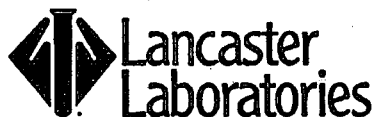
17LEC SDG#: LEC01-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 14:04	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 21:44	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015828

Collected: 03/19/2003 15:05 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:52

PO Box 8923

Discard: 04/05/2003

MW15I Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

15ILC SDG#: LEC01-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method	Units	Dilution Factor
				Detection Limit		
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 14:35	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 22:44	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015829

Collected: 03/19/2003 16:38 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:52

PO Box 8923

Discard: 04/05/2003

MW15S Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

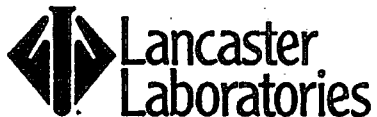
15SLC SDG#: LEC01-12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 15:05	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/24/2003 23:44	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015830

Collected: 03/20/2003 08:02 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:52

PO Box 8923

Discard: 04/05/2003

SW8 Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

SW8LC SDG#: LEC01-13

CAT No.	Analysis Name	CAS Number	As Received		As Received	Units	Dilution Factor
			Result		Method Detection Limit		
08238	BTEX (EPA 602)						
05538	Total Xylenes	1330-20-7	2.7	J	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.		0.20	ug/l	1
07030	Toluene	108-88-3	N.D.		0.20	ug/l	1
07031	Ethylbenzene	100-41-4	0.91	J	0.20	ug/l	1
00554	Base Neutrals (cont)						
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 15:35	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/25/2003 00:44	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015831

Collected: 03/20/2003 08:23 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05
Reported: 03/28/2003 at 15:52
Discard: 04/05/2003
SW5 Grab Water Sample

RMT, Inc.
PO Box 8923

Madison WI 53708-8923

L. E. Carpenter

SW5LC SDG#: LEC01-14

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	1. J	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 16:05	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/25/2003 01:44	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015832

Collected: 03/20/2003 08:35

by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

Reported: 03/28/2003 at 15:52

Discard: 04/05/2003

SW7 Grab Water Sample

RMT, Inc.

PO Box 8923

Madison WI 53708-8923

L. E. Carpenter

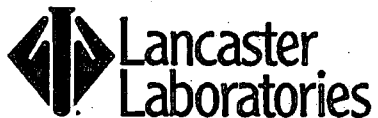
SW7LC SDG#: LEC01-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method Detection Limit		
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 16:35	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/25/2003 02:43	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015833

Collected: 03/20/2003 09:20 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05
Reported: 03/28/2003 at 15:52
Discard: 04/05/2003
MW11D Grab Water Sample

RMT, Inc.
PO Box 8923

Madison WI 53708-8923

L. E. Carpenter

M11DL SDG#: LEC01-16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00554	Base Neutrals (cont)	EPA 625	1	03/25/2003 03:43	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1



Analysis Report

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Lancaster Laboratories Sample No. WW 4015834

Collected: 03/20/2003 10:25 by JPM

Account Number: 09322

Submitted: 03/20/2003 16:05

RMT, Inc.

Reported: 03/28/2003 at 15:52

PO Box 8923

Discard: 04/05/2003

MW4 Grab Water Sample

Madison WI 53708-8923

L. E. Carpenter

MW4LC SDG#: LEC01-17*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
08238	BTEX (EPA 602)					
05538	Total Xylenes	1330-20-7	N.D.	0.60	ug/l	1
07029	Benzene	71-43-2	N.D.	0.20	ug/l	1
07030	Toluene	108-88-3	N.D.	0.20	ug/l	1
07031	Ethylbenzene	100-41-4	N.D.	0.20	ug/l	1
00554	Base Neutrals (cont)					
00669	bis(2-Ethylhexyl)phthalate	117-81-7	46.	1.	ug/l	1

State of New Jersey Lab Certification No. PA011

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
08238	BTEX (EPA 602)	EPA 602	1	03/26/2003 17:06	Stephanie A Selis	1
00554	Base Neutrals (cont)	EPA 625	1	03/25/2003 04:43	Brian K Graham	1
08108	625 Water Extraction	EPA 625	1	03/23/2003 22:15	Sharon L Jones	1

Quality Control Summary

Client Name: RMT, Inc.

Group Number: 845678

Reported: 03/28/03 at 03:53 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 03081WAC625 bis(2-Ethylhexyl)phthalate	Sample number(s): 4015816-4015834 N.D.	1.	ug/l	99		75-113		
Batch number: 03085A36A Total Xylenes	Sample number(s): 4015816-4015818, 4015820-4015832, 4015834 N.D.	.6	ug/l	96	95	82-120	1	30
Benzene	N.D.	.2	ug/l	96	95	80-118	1	30
Toluene	N.D.	.2	ug/l	98	97	82-119	1	30
Ethylbenzene	N.D.	.2	ug/l	94	94	81-119	1	30
Batch number: 03085A36B Total Xylenes	Sample number(s): 4015818-4015819 N.D.	.6	ug/l	96	95	82-120	1	30
Benzene	N.D.	.2	ug/l	96	95	80-118	1	30
Toluene	N.D.	.2	ug/l	98	97	82-119	1	30
Ethylbenzene	N.D.	.2	ug/l	94	94	81-119	1	30

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	BKG	DUP	DUP	Dup RPD Max
Batch number: 03081WAC625 bis(2-Ethylhexyl)phthalate	Sample number(s): 4015816-4015834 98	100	24-155	2	30			
Batch number: 03085A36A Total Xylenes	Sample number(s): 4015816-4015818, 4015820-4015832, 4015834 103	98	78-130	5	30			
Benzene	104	98	67-136	5	30			
Toluene	104	98	78-129	6	30			
Ethylbenzene	100	95	75-133	5	30			
Batch number: 03085A36B Total Xylenes	Sample number(s): 4015818-4015819 103	98	78-130	5	30			
Benzene	104	98	67-136	5	30			
Toluene	104	98	78-129	6	30			
Ethylbenzene	100	95	75-133	5	30			

Surrogate Quality Control

Analysis Name: Base Neutrals

Batch number: 03081WAC625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
4015816	88	85	80
4015817	89	84	78
4015818	86	82	79
4015819	88	82	83
4015820	86	83	78
4015821	92	88	84
4015822	96	93	85
4015823	98	91	87

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: RMT, Inc.

Group Number: 845678

Reported: 03/28/03 at 03:53 PM

Surrogate Quality Control

4015824	90	85	80
4015825	91	86	82
4015826	96	89	86
4015827	87	86	81
4015828	93	90	85
4015829	90	89	83
4015830	93	89	85
4015831	90	90	81
4015832	93	90	85
4015833	92	88	84
4015834	97	92	85
Blank	97	88	83
LCS	96	91	89
MS	92	88	84
MSD	96	93	85

Limits:	57-116	63-113	38-134
---------	--------	--------	--------

Analysis Name: BTEX (EPA 602)

Batch number: 03085A36A

Trifluorotoluene-P

4015816	97
4015817	98
4015818	87
4015820	96
4015821	99
4015822	98
4015823	97
4015824	100
4015825	98
4015826	98
4015827	98
4015828	97
4015829	98
4015830	99
4015831	100
4015832	99
4015834	99
Blank	98
LCS	100
LCSD	99
MS	99
MSD	98

Limits:	66-136
---------	--------

Analysis Name: BTEX (EPA 602)

Batch number: 03085A36B

Trifluorotoluene-P

4015818	87
4015819	98
Blank	100
LCS	100
LCSD	99
MS	99
MSD	98

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: RMT, Inc.
Reported: 03/28/03 at 03:53 PM

Group Number: 845678

Limits: 66-136

Surrogate Quality Control

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value - The result falls within the Method Detection Limit (MDL) and Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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